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**Instruction Number: DESC-I-11**

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**Standard Operating Procedures for Defense Working Capital Fund (DWCF) Owned Fuel  
at Defense Fuel Supply Points in Afghanistan**

**1. General**

1.1. The Defense Energy Support Center (DESC) is the DoD Integrated Material Manager (IMM) and DoD Executive Agent (EA) for Defense Working Capital Fund (DWCF) owned Class III Bulk Petroleum products. The purpose of this interim instruction is to provide the concept of operations, supply chain management procedures for DWCF owned petroleum at DoD Stock Point/Defense Fuel Support Point (DFSP), and specific operational procedures for locations within Afghanistan/Pakistan Purchase Program. Additionally, these procedures, and the referenced procedures below, provide instructions for accountability of capitalized fuel using the Business Systems Modernization-Energy (BSM-E). This policy has been approved for publication by DESC and the Military Service Control Points (SCPs). Responsible Officers (ROs) and/or Terminal Managers (TMs), for each stock point shall ensure compliance with this and other applicable guidance. This SOP applies to all transactions that affect the Defense Working Capital Funds (DWCF) in Afghanistan whether the facility is operated by a military organization, Military Service contracted locations, or DESC contract. The intent of these procedures is to standardize the processes used by the operating military or contractor at bulk fuel facilities in Afghanistan and improve accountability and auditability. The attachments at [Appendix 9](#) to this document provide additional standard service contractual requirements that must be complied with under the terms of a service contract.

1.1.1. **Supersession:** The information contained herein provides detailed operating procedures for operations within Afghanistan and meet the general instructions contained in DoD 4140.25-M, Volume II, Chapters 3, 5, and 7. It will remain in effect until existing operations have ceased; existing guidance has been amended to include the necessary information; or it is no longer needed. This interim instruction supersedes DESC-I-11, "Standard Operating Procedures for Defense Working Capital Fund (DWCF) Owned Fuel at Defense Fuel Supply Points in Afghanistan" dated October 1, 2007.

1.2. **References:** DESC Interim Policy and Procedures referenced below and contained within this document supplement applicable DoD Regulations, and Manuals. Interim Policy and Procedure documents are updated on a recurring basis as DESC automated systems, business process, and/or mission/operational changes occur. Thus stock point personnel responsible for management of DWCF owned fuels shall routinely access the interim policy and procedure index at the DESC Web Site to ensure current guidance is followed. The Interim Policy and Procedure Index Page can be accessed at the following DESC Web Page: <http://www.desc.dla.mil/DCM/DCMPage.asp?LinkID=DESCSFASInterimPolicy>. DFSPs will be notified at logon to the Fuels Enterprise Server (FES) when newly published or revised Interim Guidance is available for download. The FES notification will provide a hyperlink to the Interim Policy Index. Applicable DOD Regulations, Manuals, Military Standards, and DESC Interim Policy and Procedural Instruction references include:

1.2.1. [DoD 4000.25-2-M](#), Military Standard Transaction Reporting and Accounting Procedures (MILSTRAP) and [DoD 4000.25-7-M](#), Military Standard Billing System (MILSBILLS) available at <http://www.dtic.mil/whs/directives/corres/pub1.html>.

1.2.2. DoD 7000.14-R, DoD Financial Management Regulations (FMRS).  
<http://www.dod.mil/comptroller/fmr/>

1.2.3. DoD 4140.25-M, DoD Management of Bulk Petroleum Products, Natural Gas, and Coal.  
<http://www.desc.dla.mil/DCM/DCMPage.asp?pageid=699>

1.2.4. [DoD 4140.1-R, DoD Supply Chain Management Regulation](#) available at <http://www.dtic.mil/whs/directives/corres/pub1.html>.

1.2.5. [DoD 4160.21-M](#), Defense Material Disposition Manual available at <http://www.dtic.mil/whs/directives/corres/pub1.html>.

1.2.6. The Base Level User Guide (BLUG) for the Fuels Control Center (FCC) and FAS Enterprise Server (FES) can be obtained from the following DESC “Coach” web page:  
<http://ports2.desc.dla.mil/manuals/REF1111D.htm> .

1.2.7. MIL-STD-3004A Quality Surveillance for Fuels, Lubricants, and Related Products. This Military Standard is available for download at the following DESC Web Page:  
<http://www.desc.dla.mil/DCM/DCMPage.asp?pageid=593> .

1.2.8. The following Interim Policies and Procedures are applicable to the execution of the procedures cited within this document, DESC-I-11. These policy and procedure documents are available at the DESC Web Page at [\(DESC-T\) Interim Policy and Procedural Guidance](#).

1.2.8.1. [DESC-P-1, Posting of Daily and End-of-Month Transactions.](#)

1.2.8.2. [DESC-P-2, Receipt and Shipment of Petroleum Product.](#)

1.2.8.3. [DESC-P-3, Document/Data Control and Retention Policy](#)

1.2.8.4. [DESC-P-6, DESC Authorized Customers and Cash Sales.](#)

1.2.8.5. [DESC-P-7, Accountability and Custodial Responsibilities For Defense Working Capital Fund \(DWCF\) Inventory and Government Property](#)

1.2.8.6. [DESC-I-2, 1884 Report Processing.](#)

1.2.8.7. [DESC-I-4, Processing of Physical Inventory and EOM Operating Gain/Loss Transactions.](#)

1.2.8.8. [DESC-I-6, Non-DoD Sales Report Procedures.](#)

1.2.8.9. [DESC-I-7, Cash Sale Procedures.](#)

1.2.8.10. [DESC-I-12, Reverse Posting of Fuel Transactions.](#)

1.2.8.11. [DESC-I-20, DESC Stock Point Closure Procedures.](#)

1.2.8.12. [DESC-I-21, Sales and Credits of DWCF Owned Fuel.](#)

1.2.8.13. [DESC-I-24, DESC System Authorization and Access Request \(SAAR\) Procedures.](#)

1.2.8.14. [DESC-I-26, Ordering Forms and Equipment and Embossing of Forms used for Documentation of Fuel Sale/Credit Transactions.](#)

1.3. **Definitions:** A listing of definitions is provided at [Appendix 8](#)

2.0. **Order/Request Product:** Ordering activities shall develop and submit a “Forecast of Requirements” to US Army HHQ Joint Logistics Center (JLC). The JLC, in-turn, will place orders for product with DESC-Middle East (ME).

2.1. **Receipts of Product:** It is DESC policy that procedures employed for receipt accountability of DWCF product be in accordance with the best standard commercial practices, modified where necessary to accommodate contract specific requirements. See Table 1 below for product receipt process flow:

**Table 1, Receipt Process Flow**

Function	OPRs
Orders	HHQ JLC & DESC-ME
Vendor Loads	DESC-FI
Quantity Determination at Destination	CONTRACTOR
Receipt Processing	CONTRACTOR/DESC-RR

2.2. Contracts for products delivered to support operations in Afghanistan are a form of Freight/Free On Board (FOB) Destination in that the contractor has responsibility to deliver product but acceptance is at origin rather than destination. Normally with FOB Destination contracts, the quantity of the receipt is determined by product measurement at destination. However, in Afghanistan, quantities are determined (at origin) on the basis of local customs and laws. Local custom in Pakistan dictates that each truck has a "dipping chart" which indicates the gross quantity capacity of each compartment. Each truck is loaded to the gross capacity indicated on the dipping chart for particular truck by meter. The truck is then moved to another station where a dipping rod is used to take an exact measurement and product is added or removed to match the gross quantity on its dipping chart. Each truck "dipping chart" specifies the number of chambers in a truck, the quantities and dip reading per chamber. Once the gross quantity is adjusted, the truck is then sampled, temperature measurements taken, net quantities calculated and paperwork prepared.

2.3. Oversight of DESC product contractors in Pakistan is provided by a DESC Quality Representative (QR) or DESC third party service contractor. The QR or DESC third party service contractor is responsible for ensuring the trucks are inspected before loading, sampled and tested, quantities verified, sealed and quantities entered on the DD Form 250. [Appendix 4](#) provides an example of properly completed DD Form 250.

2.4. Management of inventories between acceptance at origin and delivery at destination requires confidence in the procedures occurring at destination. Operating-storage and intransit quantity discrepancies are subject to continual research in an effort to reduce fuel losses, improve operating efficiency, and to determine whether operating procedures or conditions require corrective action. Quantity variances must be reviewed monthly by the RO and by higher officials as deemed appropriate. Repetitive low dollar value losses should be researched providing the investigative costs are not prohibitive. Preventing losses requires constant vigilance by all

concerned through vigorous research, sound inventory practices, and good housekeeping. If fraud, waste of abuse is suspected, appropriate referrals to fraud counsel and criminal investigators should be made.

**2.5. Monitoring of Undelivered Shipments:** DESC-FI will monitor shipments and initiate the following actions once a shipment is 30 days overdue. DESC-FI will notify DESC-ME and the ship to DFSP for verification that the shipment has not been received. Upon written confirmation that the delivery has not been made, DESC-FI will prepare a report for DESC-B by contractor. The report will list the Contract No., CLIN, Shipment No, Date shipped and Quantity. In turn, DESC-B will notify the product supplier of the loads that have been identified as missing and request the supplier provide supporting receipt documentation within 15 days. If the supplier does not provide the required documentation of the receipt within the time specified, DESC-B will instruct DESC-ME/DESC-FI to reverse the shipments.

**2.6. Receipt Unloading Procedures:** Upon arrival of trucks and prior to unloading, adequate quantity verification and quality inspection shall be performed to insure that the product is acceptable, has not been tampered with and that the quantity as reflected on the shipping document is accurate within the tolerances of in-transit allowances as stipulated in the contract.

2.6.1. Prior to off-loading tank trucks, perform tank truck inspection in accordance with checklist in [Appendix 2](#). Document all observed discrepancies on the DD Form 250. If there is evidence of alteration of the tank compartments such as false bottoms, void compartments, attached hoses or drain connections that used to defraud the government, receipt transaction quantity shall be determined by calibrated receipt meter with temperature compensation to 15°C as discussed in paragraph 2.7. The conveyance discrepancies and the net receipt quantity shall be annotated on the DD Form 250. If seals are broken or there are signs that the truck has been tampered with, pull an additional sample and perform the testing required by [MIL-STD-3004A](#), type B-1 series if available, to ensure quality. Document all discrepancies on the DD Form 250 and submit a [DD Form 361](#), Transportation Discrepancy Report, according to instructions at [Appendix 7](#).

2.6.2. Prior to off-loading inspect and gauge the tanker for free water utilizing sight, water finding paste, and gauge stick as explained in the procedures for quantity determination below. Open the manifold valve and drain approximately one quart of the product into a clean white bucket to see if there is any bottom sediment and water. If it is determined that there is more than an 1/8<sup>th</sup> inch of water found in the tanker, then contact DESC-Middle East for further instructions. If there is less than 1/8<sup>th</sup> inch of water, drain the water off into an approved receptacle for proper disposal. It is necessary to note the amount of water (in millimeters) so that the amount of water or sediment is deducted from the total amount of fuel received calculated later in the process as well as type of contamination and annotated on the DD Form 250.

2.6.3. Obtain an all-level sample from each compartment of the transport truck from the dome IAW ASTM D4057, "*Manual Sampling of Petroleum and Petroleum Products*" and ensure that testing minimums consist of a visual (clear and bright and visually free of water and sediment), API gravity, electrical conductivity check for acceptable SDA limits (JP-8) and if product is considered within acceptable limits in accordance with [MIL-STD-3004A](#), then discharge contents. Definitions of the sample types are found in paragraph 4.1.2.4 of MIL-STD-3004A.

2.6.4. **Quality Discrepancies:** Quality discrepancies shall be investigated and reported through appropriate command channel and SCP to DESC-BQ. Details of the quality discrepancy shall be submitted to DESC-BQ in accordance Petroleum Quality Deficiency Report (PQDR) instructions at the DESC Web Page available using the below hyperlink. Quality Deficiency Reports containing all of the required information shall be transmitted to the following e-mail addresses: [DESC.BQoffice@dla.mil](mailto:DESC.BQoffice@dla.mil) and the DESC-Middle East Quality Manager. Additionally, the PQDR form is available in PDF format for electronic submission via the following DESC

Web Page hyperlink: <http://www.desc.dla.mil/DCM/DCMPage.asp?PageID=100> . Take digital photos if possible and include these photos in the PQDR Submission package.

**2.7. Quantity Determination:** The method(s) to be followed for quantity determination at the product acceptance point shall be according to the terms of the contract for each location. Make sure you check the “Notes” section of the contract for modifications of quality determination clauses. Additional measurements are made upon receipt as a means of inventory control and in order to take contract action against the transporter of the product should discrepancies be determined. By taking measurements by various methods the inventory control checks can be validated against each other. The quantities received into bulk fuel facilities in Afghanistan will be determined as per the terms of each respective contract and as defined as follows: Although the preferred method for the determination of quantity is temperature compensating meter (TCM), for all fuel receipts into bulk facilities in Afghanistan the procedures in [Appendix 3](#) “Alternate Quantity Determination for Tank Truck Receipts” will be followed, as applicable, with the “final” quantity determination being dip readings for deliveries from Pakistan (Shell/Caltex/WFS/Air BP). Appendix 3 also provides instructions for quantity determination method should the transport vehicle show any evidence of tampering or modifications that would render gauge/dip reading inaccurate. Receipt quantities for deliveries from other locations, i.e. Afghanistan (Red Star) will be determined by TCM meter. These quantities as determined by the [Bulk Fuel Receipt Spreadsheet](#) and will be indicated on the DD Form 250, Material Inspection and Receiving Report, (block 17). Note: In lieu of a TCM a standard flow-meter may be used provided the temperatures are properly recorded and calculations performed to convert gross quantities to net at 15 ° C. Refer to [Appendix 2](#), Receipt Delivery In-Check and Out-Check Procedures.

**2.7.1. World Fuel Service (WFS)/Shell/Air BP/Caltex (Pakistan) –** At receipt, document and calculate both dip readings and meter readings. However, if the contract so provides, the dip reading should be deemed the official quantity at destination. Note: Depending on the terms of the contract, the Pakistan contractor may dip and weigh and/or meter at source with the dip reading deemed the official quantity determination.

**2.7.2. Red Star (Afghanistan) –** At receipt both dip reading (mm only) and meter taken but with the meter reading being the official quantity at destination. Note: Red Star does not indicate a quantity for their dip readings, since the trucks do not have calibration charts, and only use these readings as a reference with the official quantity determined at source being determined by weight at source.

**2.7.3.** All meters will be calibrated in accordance with applicable standards/contract requirements. All contracts for operation of fuel facilities which store DWCF fuel will contain requirements for meters, and the calibration of meters in accordance with industry standards. Additionally, dipstick measurements will be taken on each tank truck/lorry compartment to be used as a comparison and will be annotated on the [Bulk Fuel Receipt Spreadsheet](#) and the DD Form 250. The purpose of the additional step is to allow DESC to adequately substantiate losses and assist in recouping those losses that are outside the variation of quantity due to measurement error as stated in the contract.

**2.7.4. Determination of Volume with Temperature Compensating Meter (TCM):** As stated in the procedures above, ensure that the seals match, that trucks have been sampled and approved for unloading, that water has been measured as explained above and drained if appropriate.

**2.7.4.1.** Prior to beginning the unloading operation, observe and write down the meter reading of the TCM being used for unloading the tank truck/lorry.

**2.7.4.2.** After finishing the unloading operation, observe and write down the meter reading of the TCM being used for unloading the tank truck/lorry.



2.7.4.3. The difference between the beginning and ending meter reading is the quantity received. Record this number on the DD Form 250. Annotate on the DD Form 250 by the quantity received TCM Used.”

2.7.5. Determination of Volume with Flow-Meter (non-Temperature Compensated): As stated in the procedures above, ensure that the seals match, that trucks have been sampled and approved for unloading, that water has been measured as explained above and drained if appropriate.

2.7.5.1. Prior to beginning the unloading operation, observe and write down the meter reading of the flow-meter being used for unloading the tank truck/lorry.

2.7.5.2. Determine the temperature of the tank truck. If there is more than one compartment, average the numbers from all compartments and use the average number as the temperature of truck for volume corrections. Temperature measurement shall be determined no more than 15 minutes prior to beginning off load operation.

2.7.5.3. After finishing the unloading operation, observe and write down the meter reading of the flow-meter being used for unloading the tank truck/lorry.

2.7.5.4. The difference between the open and close meter reading is the quantity received. Record this number on the DD Form 250 as shown in the Appendix 4 example.

2.7.5.5. Using the average truck temperature and the Density at 15° C, look up the Volume Correction Factor (VCF) in Table 54B. Multiply the VCF times the gross amount received and record the result on the DD Form 250. Record the average truck temperature and the VCF used on the DD 250.

2.8. Bulk Fuel Receipt Spreadsheet: The spreadsheet ([Appendix 5](#)) will be used to document each fuel receipt.

2.8.1. Quantities will be annotated on the spreadsheet for each truck received. When using the [spreadsheet](#), the responsible individual will need to fill in the opening and closing meter readings, the load dip measurements and the associate quantities, the receipt dip measurement and corresponding gross observed quantities, observed density, Density at 15 ° C, and volume correction factors.

2.8.2. The [spreadsheet](#) will compute the amount received (gross and net) as well as determine the variance in shipping and resultant percentage. In addition, the calculation for meter/dipstick comparison will be computed.

Note: If the form is to be filled out manually all entries and calculations will need to be performed. Once the metered quantities and dipstick quantities are known, use the following calculations to determine the transportation variation and meter/dipstick variation.

$$(1) \text{ Metered Transportation Variation} = \frac{\text{Quantity Shipped per DD 250} - \text{Net Meter Received Amount}}{\text{Quantity Shipped per DD 250}} \times 100$$

$$(2) \text{ Dipstick Transportation Variation} = \frac{\text{Quantity Shipped per DD 250} - \text{Net Stick Received Amount}}{\text{Quantity Shipped per DD 250}} \times 100$$

$$(3) \text{ Dipstick/Meter Variation} = \frac{\text{Net Meter Amount Received} - \text{Net Stick Received Amount}}{\text{Net Meter Amount Received}} \times 100$$

2.8.3. Signing the DD Form 250 Document: Once the net quantity corrected is determined in liters, multiply the number by 0.264172 to obtain the quantity in gallons. This is the number that will be used on the DD Form 250. The receiving activity will record the Net Meter Received Amount in US Gallons and Liters on the DD Form 250 in Block 17 (Quantity Shipped/Received). If the quantity received is the same as the quantity shipped,

circle the origin quantity. If the quantity received is different from the quantity shipped, write in the quantity received and encircle. Circle the Net Meter Received Amount recorded for both the US Gallons and Liter quantity.

2.8.4. Reporting Out of Tolerance Quantities: Compare the quantity received with the quantity shipped as indicated on the DD Form 250 block 17.

2.8.4.1. Due to measurement variations encountered between origin and destination methods, DESC currently has established a 3% (.03) by volume permitted variation for F34. If reductions in measurement error occur, DESC may elect to modify the current transportation permitted variation. All other product receipts (e.g. TS1 and ground fuels) are at the standard .5% (.005) allowable variation.

2.8.4.2. If the quantity received is different than that shown on the DD Form 250 by more than the allowable tolerance, closely inspect the truck for all signs of pilferage i.e., hidden compartments, unexplained hoses and lines or any other item that is suspicious in nature and annotate on the DD Form 250, Customer Use block or on the reverse side of the form. If the reverse side is used, enter "See Reverse" in the Customer Use block. If pilferage is suspected, isolate the vehicle, contact DESC-ME, initiate an investigation, and contact the local criminal investigative authority. Any offers or requests to sign for a different quantity than the quantity actually delivered shall be immediately reported and annotated on the DD Form 250. The details of the incident (e.g. date, CLIN, transport identification number, name of driver, description of the offer or request, etc.) shall also be documented on office memorandum signed by the reporting individual.

2.8.4.3. Quantity Discrepancies: Variances between quantity shipped and quantity determined at destination that exceed the tolerances specified in paragraph 2.8.4.1 shall be thoroughly investigated to determine root causes and to ensure that appropriate corrective actions have been implemented. The quantity determined at destination, method used to determine quantity, and other defects noted with the delivery shall be annotated on the receipt document.

2.8.4.4. DoD 4500.9-R, Part 2, Chapter 210, Transportation Discrepancy Reports (TDR), exempts bulk petroleum shipments via all transportation modes from TDR submission requirements contained in DoD 4500.9-R, Chapter 210 TDR requirements, and references DoD 4140.25-M, Volume II for specific guidance regarding submission of TDRs for bulk petroleum shipments via all transportation modes. Pending revision of DoD 4140.25-M, DFSPs shall submit discrepancy reports in writing using [DD Form 361](#), Transportation Discrepancy Report according to instructions in [Appendix 7](#) when one or more of the below conditions exist. The DD Form 361 is also available at <http://www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm>. The DD Form 361 shall be submitted through appropriate command channels, applicable DESC regional office/QAR, and SCP.

2.8.4.5. Evidence of damage, theft, or tampering exists.

2.8.4.6. Seals are missing, broken, improperly installed, or when seal numbers annotated on the shipping document do not match the seals on the conveyance.

2.8.4.7. Variance between the quantities determined at origin (loading) and at receipt location exceeds allowable tolerances.

2.8.4.8. Shipment documentation is missing or invalid.

2.8.4.9. Other noted discrepancies with delivery conveyance.

2.8.4.10. DFSP operations personnel shall notify the Responsible Officer and/or Terminal Manager prior to off-loading any deliveries where there is evidence of fraud, tampering, or gross negligence. In turn, the RO shall promptly inform the local commanding officer and/or appropriate command level office, DESC-FI ([Inventory Division](#)), and the DESC Fraud Counsel. Such incidents shall be thoroughly investigated and documented results of the investigation provided to the [DESC Fraud Counsel](#).

2.8.4.11. Provide DESC-ME with a copy of the DD 250, Bulk Fuel Receipt Spreadsheet, and the destination investigative report. DESC-ME will provide the report to DESC-FI, DESC-BQ (Quality Operations Division), and cognizant Contracting Officer for further investigation. Timely reporting back to DESC-BF (OCONUS Contracting Division) is the key in recovering lost quantity through contract actions.

2.9. Disposition and/or Reclamation of Off-Specification Fuel: Activities shall refer to MIL-STD-3004A and applicable Military Service Guidance for detailed fuel quality assurance/ surveillance procedures and minimum quality use limit requirements. Product that is suspected of being contaminated or known to be unsuitable for use shall be segregated to minimize further contamination pending disposition and/or reclamation as follows:

2.9.1. Capitalized fuel stock points and end-use customers that identify fuel quality problems with receipts shall provide documentation, in the form of an analysis report or other written correspondence, of the quality discrepancies to DESC Middle East. The DESC-ME Quality Manager will notify DESC-BQ who in turn will act as the liaison between the customer/region and the appropriate DESC contracting officer, e.g. DESC-BF for bulk fuel contracts or DESC-PE (Ground Fuels Division I) for PC&S contracts.

2.9.2. Capitalized fuel stock points holding contaminated product, or product suspected of being contaminated shall notify the DESC-ME Quality Manager and DESC-FI prior to any disposition or regrade actions taken. The notification shall include the quantity of suspect/contaminated fuel, and the degree and types of known contamination, i.e. Water, sediment, chemical, commingling, etc... With the notification include the test data on all parameters tested on the sample.

2.9.3. The DESC-ME Quality Manager, in coordination with DESC-BQ and DESC-FI, shall determine disposition of the product. If additional analysis is required, the DESC-ME Quality Manager will instruct the reporting activity as to the type and quantity of sample to be collected, and the location the sample should be shipped to for analysis.

2.9.3.1. In instances where excessive contamination is evident without a more comprehensive sample analysis, or when laboratory analysis indicates the product is not suitable for regrade or blending to achieve minimum use limits, the DESC-ME Quality Manager in coordination with DESC-BQ and DESC-FI shall advise the activity to initiate actions to have product disposed of through the Defense Reutilization and Marketing Service (DRMS). [DoD 4160.21-M](#), Defense Material Disposition Manual provides instructions for turn in of product to DRMS.

2.9.3.2. When laboratory analysis indicates the suspect/contaminated fuel to be suitable for blending and/or regrade to another useable product, the DESC-ME Quality Manager, after coordination with the appropriate DESC-BQ program manager/action officer, will advise the activity as to proper blend ratio and/or regrade options.

2.9.4. Capitalized activities shall process the appropriate inventory transactions to BSM-E/FAS depending on the disposition of the product. For example, if the product is determined to be unusable and is disposed of via DRMS, or a local contract is set up to dispose of waste fuel the activity will process a Determinable Loss transaction using Determine Type "Reclaim Loss/DRMO." If the product is determined to meet quality use



limits as a different grade of product, process a Regrade transaction to the appropriate product ledgers. Determinable loss and product regrade transactions shall be documented using DD Form 1348-8, DFSP Inventory Accounting Document and End of Month Report. The DD Form 1348-8 is available for download at the following web page: <http://www.dtic.mil/whs/directives/infomgt/forms/ddforms1000-1499.htm> . For Fuels Control Center (FCC) users, the application automatically generates the DESC Form 24, End of Month Report. The DESC Form 24 is also available at the DESC Forms Page using this hyperlink: <http://www.desc.dla.mil/DCM/Files/DESC%20Form%2024,%20EOM%20Report,%2014%20Feb%2006.pdf>

**3.0. JP8 and TS1 Receipt and Regrade Processing Procedures:** These procedures provide instructions for documenting and processing receipts of JP8 and TS1, and instructions for regrade of product into TS1 or JP8 stocks. (Note: JP8 is processed in BSM-E as F34 but is referred to as JP8 in the text of this document.) This instruction applies at locations where both JP8 and TS1 are stored. Where both products are stored, authorization to regrade JP8 to TS1 applies only when there is no JP8 ullage available. In lieu of incurring demurrage for transportation awaiting discharge at the gate, the activity is permitted to place JP8 in available TS1 tanks/bags. This policy complements current technical guidance on the use of TS1 and JP8.

**3.1. Restricted Application:** The processing of regrade transactions from JP8 to TS1 or TS1 to JP8 in the Fuels Enterprise Server (FES) is specifically restricted to Defense Fuel Support Point (DFSPs) within Afghanistan.

**3.2. Fuel Ledgers:** DFSPs that manage more than one type of aviation fuel shall establish separate product ledgers in the Fuels Control Center (FCC) program to account each product. DESC-FI shall ensure that the FAS Enterprise Server (FES) is loaded with the following additional National Stock Numbers (NSNs).

Product Code	NSN	Nomenclature
JP8	9130-01-031-5816	JP8, Aviation Turbine Fuel
TS1	9130-01-491-2201	TS1, Turbine Fuel Aviation Grade
F34	9130-01-545-8464	F34, Aviation Turbine Fuel, Kerosene Type

### 3.3. Technical Issues:

3.3.1. JP8 is a U.S. aviation specification product that is also accepted for tactical ground use. It contains necessary additives for optimal equipment performance. Current contract sources for aviation fuel in Afghanistan are for Jet A-1 (the three-digit alpha-numeric North Atlantic Treaty Organization –NATO designation given to Jet A-1 is F34). U.S. specification additives required for JP8 are injected into the Jet A-1 to create JP8 (F34); however, grade code F34 is currently being used in FES to account for receipts, sales, shipments, etc., of the additized aviation product.

3.3.2. TS1 is a Russian aviation specification product. Russian additives are not approved for use in US aircraft and equipment. DESC procured TS1 is procured as NEAT (containing no additives). DFSPs shall inject US F-34 specification additives creating TS1 additized product.

3.3.3. US Army Petroleum Center (APC) has authorized the use of TS-1 with additives (CI, FSII, SDA) for ground use if the TS1 meets the additional use limits that are identified below. TS-1 use limit testing is required for all batches of product considered for ground use. The approved APC ground use limits for TS1 are shown in Table 2.

**Table 2: Approved APC Ground Use Limits for TS1**

Tests	Ground Use Limits
G. Flash Point, Degrees c	32 min
I. Kinematic Viscosity,	mm <sup>2</sup> /s at 40c*
Minimum	1.0
Maximum	4.1

\* **NOTE:** Extrapolation of GOST 10227 Kinematic Viscosity (KV) data points at -40°C and +20°C shall be used to determine the KV value at +40°C. The KV +40°C value must fall within the APC ground use limits above to be acceptable for ground use.

3.4. JP8 Receipts into TS1 stocks: JP8 fuel can be received into FES inventory by two methodologies: shipments and contracted receipts. The process utilized to receive JP8 fuel into inventory is dependent on the source supply and the documentation that accompanies the product.

3.4.1. JP8 receipts into TS1 stocks via fuel shipments: Fuel that is shipped from one capitalized DFSP to another DFSP shall process as a shipment and a receipt as JP8, into the appropriate FCC ledger. The Shipping DFSP will process an individual shipment document per truck and document them individually on a [DD Form 1348-7](#), DFSP Shipment and Receipt Document, in two copies. The DD Form 1348-7 is available via the FCC program and/or available for download at the following web page: <http://www.dtic.mil/whs/directives/infomgt/forms/ddforms1000-1499.htm>. See [DESC-P-2](#) for instructions on completion of the DD Form 1348-7. One copy of the DD 1348-7 will be kept by the shipping DFSP and one copy will accompany the truck to the receiving DFSP. Each DFSP shall retain a copy of the completed DD Form 1348-7 on file for the current fiscal year plus two previous fiscal years. After a receipt is processed into the FES as JP8, a product identity change record will be made reflecting the receipt quantity being regraded into TS1 per regrade instructions contained in the [Base Level User Guide \(BLUG\) / Coach Document Index](#).

3.4.2. JP8 receipts into TS1 stocks via a commercial contracted source: The DESC contracted supplier is required to complete a DD Form 250 per tank truck. The DD Form 250 will reference the contract number, contract line item number (CLIN), order number, individual shipment number, and delivery destination identified by Department of Defense Activity Address Code (DODAAC). The receiving DFSP will verify the receipt quantity and sign block 22 of the DD Form 250. A copy of the signed DD Form 250 will be provided back to the contracted supplier by the receiving DFSP. The original signed DD Form 250 will be maintained on file for 6 years and three months from the termination date of the contract. The receipt will be entered into the FCC ledger as JP8. After receipt into FES as JP8 a product identity change record will be made reflecting the receipt quantity being regraded into TS1 per instructions contained in paragraph 3.5.

3.5. FAS Regrade Processing: Fuel personnel processing a regrade to the FES will open the product ledger for JP8. From the JP8 accounting ledger select the date and depress Ctrl F8 (Fuel Grade Change). Select "New Record" and the Grade Change Template will appear. The template will need to have the following data fields populated:

Unit of Issue: GL

Quantity being regraded: (enter the amount)

Identity Change: R

Grade to: TS1

Management Code: B

3.5.1. The JP8 inventory will be decremented in the FES and FCC accounting ledgers once the FCC Ledger is recalculated and the transaction is sent to the FES. The TS1 inventory will automatically reflect an increase.

3.6. TS1 Receipts: TS1 fuel can be received into FES inventory by two methodologies: shipments and contracted receipts. The process utilized to receive TS1 fuel into inventory is dependant on the source supply and the documentation that accompanies the product.

3.6.1. TS1 receipts via fuel shipments: Fuel that is shipped from one capitalized DFSP to another DFSP shall process as a shipment and a receipt, by NSN, into the appropriate FCC ledger. The Shipping DFSP will process an individual shipment per truck and document them individually on a DD Form 1348-7 in two copies. See [DESC-P-2](#) for specific information regarding shipment documentation and processing procedures.

3.6.2. TS1 receipts via a commercial contracted source: The DESC contracted supplier is required to complete a DD Form 250 per tank truck. The DD 250 will reference the contract number, contract line item number (CLIN), order number, individual shipment number, and delivery destination identified by DODAAC. The receiving DFSP will verify the receipt quantity and sign block 22 of the DD Form 250. A copy of the signed DD Form 250 will be provided back to the contracted supplier by the receiving DFSP. The original signed DD Form 250 and supporting documentation shall be retained on file in compliance with [DESC-P-3](#), *“Document/Data Control and Retention Policy”*.

3.7. TS1 Regrades: Additized TS1 meeting MIL-DTL-83133E (JP8) specification can be regraded and issued for all JP8 applications. A regrade transaction will be documented on a DD Form 1348-8 and will be annotated with the document number assigned by the FES and the amount regraded. The Responsible officer will sign the DD Form 1348-8 verifying the date and quantity. The DD Form 1348-8 and supporting documentation shall be retained on file in compliance with [DESC-P-3](#). If the additized TS1 does not meet the MIL-DTL-83133E specification for JP8, it will remain additized TS1. The additized TS1 may be issued for aviation use providing it meets the minimum use limits for TS1 aviation fuel. Additionally, the additized TS1 can be issued for ground fuel use as well if it meets the requirements outlined in paragraph 3.3.3 of this document

3.7.1 FAS Regrade Processing: Fuel personnel processing a regrade to the FES will open the product ledger for TS1. From the TS1 accounting ledger select the date and depress Ctrl F8 (Fuel Grade Change). Select “New Record” and the Grade Change Template will appear. The template will need to have the following data fields populated:

Unit of Issue: GL

Quantity being regraded: (enter the amount)

Identity Change: R

Grade to: JP8

Management Code: B

3.7.2. The TS1 inventory will be decremented in the FES and FCC accounting ledgers once the FCC Ledger is recalculated and the transaction is sent to the FES. The JP8 inventory will automatically reflect an [increase](#).

4.0. **Automotive Diesel Fuel Receipts and Issues**: These procedures provide instructions for documenting and processing Receipts and Issues of Automotive Diesel Fuel. These procedures include the agreed quality policy requirements for use. The quality surveillance requirements are based on the acceptance of various national diesel fuel specifications that have different specification parameters. Notwithstanding the source of the diesel, like grades do not require segregation.

4.1. Restricted Application: The processing of the DWCF issues and receipts in the FES shall be restricted to DFSPs within Afghanistan.

4.2. Fuel Ledgers: DFSPs that manage more than one type of diesel fuel shall establish separate product ledgers in the Fuels Control Center (FCC) program to account for each product. DESC-FI shall ensure that the FAS Enterprise Server (FES) is loaded with the following National Stock Numbers (NSNs).

Product Code	NSN	Nomenclature
RDF	9140-01-492-7612	Diesel Fuel, Automotive GOST Spécification Diesel
PAD	9140-01-526-5493	Diesel Fuel, Automotive Pakistani Spécification Diesel

#### 4.3. Technical Issues:

4.3.1. PAD is a Pakistani specification diesel fuel having the specification requirements as identified in Table 3:

**Table 3, Pakistani Specification Diesel**

Tests	PAD Specification Limits
A. Specific Gravity at 15.6°C (60°F)	Report
B. Color, ASTM	Max. 3
C. Distillation	
50% Vol. Rec. @°C	Report
90% Vol. Rec. @°C	Max. 365
D. Flash Point, PMCC) °C	Min. 54
E. Sulphur content, % wt.	Max. 1.0
F. Copper Strip Corrosion	Max. No. 1
G. Kinematic Viscosity, cSt at 40c	1.5 – 6.5
H. Cloud Point, °C	
MAR – OCT	Max. 9
NOV – FEB	Max. minus (-) 9
I. Pour Point, °C	
MAR – OCT	Max. 6
NOV – FEB	Max. minus (-) 12
J. Conradson Carbon Residue on 10% distillation residue, % wt.	Max. 0.2
K. Ash, % wt.	Max. 0.01
L. Sediment, % wt.	Max. 0.01
M. Water, % Vol.	Max. 0.05
N. Cetane Index	Min. 45
O. Neutralization Value	
Total Acid No., mg. KOH/g	Max. 0.5

Strong Acid No., mg. KOH/g	Max. nil
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4.3.2. RDF is a Russian specification diesel fuel having the specification requirements as identified in Table 4 below.

**Table 4, Russian Specification Diesel**

Tests	RDF Specification Limits	
=====	=====	
A. Specific Gravity at 15.6°C (60°F)	Report	
B. Color, ASTM	No test specified	
C. Distillation	Summer Grade	Winter Grade
50% Vol. Rec. @°C	Max. 280	Max. 280
96% Vol. Rec. @°C	Max. 360	Max. 340
D. Flash Point, PMCC) °C	Min. 40	Min. 35
E. Sulphur content, % wt.	Max. 0.5	
F. Copper Strip Corrosion	Uses different test method	
G. Kinematic Viscosity, cSt at 20c	3.0 – 6.0	1.8 – 5.0
H. Cloud Point, °C		
MAR – OCT	Max. minus (-) 5	
NOV – FEB	Max. minus (-) 25	
I. Pour Point, °C		
MAR – OCT	Max. minus (-) 10	
NOV – FEB	Max. minus (-) 35	
J. Conradson Carbon Residue on 10% distillation residue, % wt.	Max. 0.3	
K. Ash, % wt.	Max. 0.01	
L. Sediment, % wt.	Uses different test method	
M. Water, % Vol.	Uses different test method	
N. Cetane Index	Min. 45	
O. Neutralization Value		
Total Acid No., mg. KOH/g	Uses different test method	
Strong Acid No., mg. KOH/g		



4.3.3. Both PAD and RDF are approved for use as a diesel fuel by the Service Technical Offices. Acceptance of either product on receipt is to be based on the procurement specification limits. Once accepted into the DFSP, mixtures of the PAD and RDF will create a blend that may not meet either procurement specification. The Quality Surveillance Limits provided in Table 5 are to be used when mixtures of PAD and RDF are tested.

**Table 5, Afghanistan Diesel Use Limits**

<b>Tests</b>	<b>Afghanistan Diesel Use Limits</b>
A. Specific Gravity at 15.6°C (60°F)	Report
B. Color, ASTM	Max. 3
C. Distillation	
50% Vol. Rec. @°C	Report
90% Vol. Rec. @°C	Max. 365
D. Flash Point, PMCC) °C	Min. 35
E. Sulphur content, % wt.	Max. 1.0
F. Copper Strip Corrosion	Max. No. 1
G. Kinematic Viscosity, cSt at 40c	1.5 – 6.5
H. Cloud Point, °C	
MAR – OCT	Max. 9
NOV – FEB	Max. minus (-) 9
I. Pour Point, °C	
MAR – OCT	Max. 6
NOV – FEB	Max. minus (-) 12
J. Conradson Carbon Residue on 10% distillation residue, % wt.	Max. 0.2
K. Ash, % wt.	Max. 0.01
L. Sediment, % wt.	Max. 0.01
M. Water, % Vol.	Max. 0.05
N. Cetane Index	Min. 45
O. Neutralization Value	
Total Acid No., mg. KOH/g	Max. 0.5
Strong Acid No., mg. KOH/g	Max. nil

4.3.4. Blending of JP-8 and DF2 to make DF1: Due to a shortage of supply of Diesel Fuel (DF2) in the Afghanistan area of responsibility, DFSPs are authorized to blend JP8 and DF2 at a 1:1 ratio (50%/50% blend) when mission requirements dictate. However, consultation with and approval by the SAPO shall be required prior to any such blending so that re-grades are minimized to the greatest extent possible. DFSPs are required to follow standard product regrade procedures to regrade the blended product to DF1.

4.3.4.1. The DF2 (PAD/RDF) should only be blended with JP8 since no additional testing is required after blending of these two products as long as both products being blended meet their respective specifications and or intra-governmental receipt limits. The NATO Code for this 50%/50% blend of DF2 and JP8 is F65. The blending of TS-1 and DF2 is not authorized until such time as this blending procedure is approved by DESC in coordination with the Service Control Points (SCP).

4.4. Diesel Receipt Procedures: Diesel receipts shall be received into FES inventory by two methodologies: shipments and contracted receipts. The process utilized to receive diesel fuel into inventory is dependent on the source of supply and the documentation that accompanies the product.

4.4.1. Diesel receipts via DFSP fuel shipments: Fuel that is shipped from one capitalized DFSP to another DFSP shall process as the diesel shipment and receipt as PAD into the appropriate FCC ledger. The Shipping DFSP will process an individual shipment per truck and document them individually on a DD Form 1348-7 in two copies. One copy of the DD 1348-7 will be kept by the shipping DFSP and one copy will accompany the truck to the receiving DFSP. Each DFSP shall retain a completed copy of the DD Form 1348-7 on file in compliance with [DESC-P-3, "Document/Data Control and Retention Policy"](#).

4.4.2. Diesel receipts from a commercial contracted source: The DESC contracted supplier is required to complete a DD Form 250 per tank truck. The DD Form 250 will reference the contract number, contract line item number (CLIN), order number, individual shipment number, product and delivery destination identified by Department of Defense Activity Address Code (DODAAC). The receiving DFSP will verify the receipt quantity and sign block 22 of the DD Form 250. A copy of the signed DD Form 250 will be provided back to the contracted supplier by the receiving DFSP. The receipt will be entered into the FCC ledger per the contracted requirement, either PAD or RDF. After receipt into FES all RDF product will have a product identity change record reflecting the receipt quantity being regraded into PAD per instructions contained in paragraph 4.5.

4.5. FAS Regrade Processing: Fuel personnel processing a regrade to the FES will open the product ledger for RDF. From the RDF accounting ledger select the date and depress Ctrl F8 (Fuel Grade Change). Select "New Record" and the Grade Change Template will appear. The template will need to have the following data fields populated:

Unit of Issue: GL

Quantity being regraded: (enter the amount)

Identity Change: R

Grade to: PAD

Management Code: B

4.5.1. The RDF inventory will be decremented in the FES and FCC accounting ledgers once the FCC Ledger is recalculated and the transaction is sent to the FES. The PAD inventory will automatically reflect an increase.

5.0. Document Control File Disposition: Auditable/supporting documents, appointment letters, and data backup files for fuel transactions shall be maintained in an orderly manner in a document control file and disposition file in compliance with [DESC-P-3 "Document/Data Control and Retention Policy"](#). Tactical

DFSPs identified in this instruction will forward document control files to DESC-RR for storage and retention as required. As a minimum document control files over 12 months old will be forwarded to DESC-RR on a monthly basis and shall include both documentation and data backup for each completed month. However, if storage space limitations dictate, tactical DFSPs may forward document control files older than 3 months or 6 months to DESC-RR, Retail Management Division, for retention. See [DESC-I-20](#), Defense Fuel Supply Point (DFSP) Closure Procedures and [DESC-P-3](#), for additional information regarding site closure and files disposition procedures. The shipping address for document control files and data backup disks is contained in [Appendix 1](#) of this document.

**6.0. USA Resale Procedures:** The U.S. Army has established local transportation contracts for delivery of fuel via 5,000 gallon tank truck to Forward Operating Bases (FOB's). The resale procedures outlined herein are required and must be followed if the USA is to receive credit for fuel issued downrange to Coalition Partner Nation Customers and Kandahar AB, if applicable. These procedures are provided to assist the USA in properly documenting and processing resale transactions because once a fuel product has been issued to a 5,000 gallon tank truck, ownership of fuel has been transferred from DESC to USA (W91DW4). Resales and any subsequent credits for products returned from a FOB to the issuing DFSP (W91DW4) shall be documented and processed according to instructions in [DESC-P-6](#), [DESC-I-21](#) and [DESC-I-7](#). The resale procedures detailed in this interim instruction and in DESC-I-29 will eventually be superseded and migrated to DESC-I-22 (in development) effective 1 Feb 08. The following specific guidance also applies:

6.1. All resales of fuel to FOB's, NATO Operated Locations (i.e. Kandahar Air Base) and Coalition Partners shall be documented using the DD Form 1898, Fuels Sales Slip. The DD Form 1898 is the auditable source document mandatory for use in these resale procedures and for the USA to receive a credit processed through BSM-E. However, the USA may determine that additional forms (i.e. DA 3643 or other) are required for management control purposes.

6.2. Returns (credits) of fuel from a FOB to the DFSP (W91DW4) shall be tested to ensure the product meets product quality requirements and shall be off-loaded into DWCF stock via a calibrated meter. Document the return to DWCF stock on a DD Form 1898 and process a credit transaction to BSM-E using the Customer DODAAC and line of accounting shown in [Table 6](#) and in accordance with the following subparagraphs.

6.2.1. For the USA to receive credit on fuel sold to Coalition partners (to include 9008/9009 series customers), and Kandahar AB, the DD Form 1898 shall be annotated and returned to the selling DFSP (W91DW4) for processing to BSM-E. When accomplishing the DD Form 1898 include the FOB name and Coalition Partner country name in the "*Service Location and Nation*" block of the DD Form 1898. See DESC-I-21, paragraph 4.3 for further instructions on completing the DD Form 1898.

6.2.2. Bagram AB (W91DW4), the selling DFSP, shall process a credit transaction using the applicable US Army DODAAC and line of accounting of the original customer (W91DW4). A corresponding sale transaction shall also be processed to the customer (T-Series DODAAC) that received the product as annotated on the DD Form 1898. The quantity for the credit transaction and the quantity of the corresponding resale transaction shall be equal to the quantity issued downrange at the FOB.

6.2.3. Following is an example scenario: The original sale of 5,000 gallons to FOB site "X" was billed to W91DW4 and processed to BSM-E. The tank truck proceeds downrange and returns to Bagram AB after off-loading operations with documentation supporting a resale of 2,000 gallons to customer "TFITXX". In addition, 2,000 gallons of product was returned back (after quality determination) to Bagram AB (DWCF Stock). In order for the USA to receive credit for the resale and credit for the return back to DWCF stock, process the following transactions:

6.2.3.1. Document the resale to the coalition customer on DD Form 1898 and process a sale transaction in the amount of 2,000 gallons using the applicable TF Series DODAAC and line of accounting shown in Table 6 to BSM-E.

6.2.3.2. Document a credit on the DD Form 1898 for the quantity of product returned back to DWCF stock (pending quality determination), and process the credit transaction using the original US Army customer DODAAC W91DW4 and line of accounting shown in [Table 6](#) to BSM-E.

6.2.3.3. Process a second credit transaction to DODAAC W91WD4 in the amount of 2,000 gallons for the product returned to stock. The net of these transactions should result in 1,000 gallons either issued to another customer (i.e., USA, than no further resale/credit transactions required unless another DoDAAC other than W91DW4 is to be charged) or is still remaining in the tank truck.

**Table 6: Sales to Forward Operating Bases, the NATO Contractor at Kandahar AB, and Coalition Partners Operating in Afghanistan**

DFSP/Selling Location/Customer	Customer DODAAC	Fund Code	Signal Code	APC	Supplemental DODAAC
Bagram AB	W91DW4	81	A	3KDF	N/A
Kandahar AB*	TBTC08	XP	A	N/A	N/A
9008/9009 Coalition Partners**	TF Series	81	B	3KJF	W91Y5J
Other Coalition Partners	TF Series	XP	A	N/A	N/A

\*Note: Effective June 30, 2007, DFSP Kandahar closed and petroleum operations transitioned to a NATO contracted operation. In the event the JLC and DESC-ME authorize support to Kandahar via sales out of stock, DFSPs shall process sales/credits to the NATO contractor (Supreme) at Kandahar Air Base to the T DODAAC that is provided in Table 6.

\*\* Note: Currently approved 9008/9009 Coalition Partners are identified in [Table 6.1](#). Countries not listed in Table 6.1 are to be documented and processed as Other Coalition Partners.

6.3. **Sales to 9008/9009 Coalition Partner Nation Customers:** Nations listed in [Table 6.1](#) are authorized under DoD Appropriations Act (e.g. Section 9008 or 9009) to receive fuel and be charged to the ARCENT line of accounting identified in [Table 6](#). The correct TF series DODAAC for the customer as reflected in the Foreign Government TF DODAAC customer listing can be obtained at <http://www.desc.dla.mil/DCM/DCMPage.asp?LinkID=DESCFAS#nondodfuel>.

**Table 6.1: Section 9008/9009 Coalition Partners**

Coalition Partners		
Afghanistan	Honduras	Philippines
Albania	Hungary	Poland
Armenia	Iraq	Romania
Azerbaijan	Jordan	Slovakia
Bosnia	Kazakhstan	Slovenia
Bulgaria	Kenya	Tajikistan
Croatia	Latvia	Thailand
Czech Rep	Lithuania	Tonga

Djibouti	Macedonia	Turkey
Dominican Republic	Moldova	Ukraine
El Salvador	Mongolia	Uzbekistan
Estonia	Nicaragua	
Georgia	Pakistan	

6.3.1. Sales to all other Coalition Partners (i.e., United Kingdom, Germany, Denmark, Netherlands, etc.) will be processed using the appropriate TF Series DODAAC for the customer as reflected in the Foreign Government TF DODAAC customer listing at

<http://www.desc.dla.mil/DCM/DCMPage.asp?LinkID=DESCFAS#nondodfuel>.

6.4. Sales or credits to Foreign Government customers authorized fuel under a Replacement in Kind (RIK) or Fuel Exchange Agreement (FEA) arrangement (TF Series DoDAACs with the letter “A” as the 5<sup>th</sup> position, e.g. TFUKA3) shall be processed with Use Code “R.” Issue documents for fuel sold to coalition refueling or transport vehicles shall reflect the vehicle registration number, signature and unit identification of the individual signing for the fuel.

6.5. All sales and credits to foreign governments and the Kandahar Air Base (NATO Contractor) shall be reported to DESC-RRF each month as outlined in [DESC-I-6, Non-DOD Sales Report Procedures](#).

7.0. Sales to U.S. Central Command (USCENTCOM) Deployment and Distribution Operations Center (CDDOC) Commercial Government Air Program (CGAP) Aircraft: Authorized CDDOC CGAP commercial tender aircraft customer representatives at applicable locations within the USCENTCOM area of responsibility (AOR) will be issued DoD Fuel Identaplates (DD Forms 1896) with appropriate customer billing data as shown in Table 7. All sales to CGAP commercial tender aircraft shall be documented and processed using the customer billing data shown in Table 7:

**Table 7: CGAP Commercial Tender Customers**

Customer Identification Code	DESC Issued T-DODAAC	Signal Code	Fund Code	Carrier Identification Number
CAT	TB Series DODAAC	A	XP	Enter the Aircraft Identification Number for the Carrier

8.0. **End-of-Month Account Reconciliation:** End-of-Month (EOM) Account Reconciliation is the process of verifying all transactions have been processed to the FES, all source documentation is accounted for, and reconciling the closing book inventory against the closing physical inventory for each product ledger maintained in the FCC and FES. EOM account reconciliation must be accomplished based on the guidance in [DESC-P-1, “Posting of Daily and End-of-Month Transactions”](#) and [DESC-I-4, “FCC Processing of Fuel Transactions, Inventory Adjustments \(Physical Inventory\) and End-of-Month Determinable Gain/Loss Transactions”](#).

The RO/TM shall forward a copy of the signed DESC Form 24/DD Form 1348-8, both in-tolerance and out of tolerance, to assigned representatives at DESC-ME, DESC-N (see [Appendix 1](#)), and AFCENT (Centaf.A4.LGSF@Shaw.af.mil) by electronic mail. The RO/TM shall retain the signed copy of the DESC Form 24/DD Form 1348-8 in the DFSP document control file in accordance with [DESC-P-3, “Document/Data Control and Retention”](#).

8.1. The on-hand fuel inventory at locations in Afghanistan shall be verified, at a minimum, on a monthly basis. This verification may be accomplished by the gauging of fuel bladders as discussed in [Appendix 6](#) where certified strapping/gauge charts are available; or by transferring product between fuel bladders through a calibrated meter. Quantity certification by rotating product through a calibrated meter may be accomplished in concert with bladder rotation or replacement schedules. For example, when a new fuel



bladder is installed, product from other fuel bladders should be transferred into the new bladder through a meter to verify quantity of product stored in the older bladder(s).

8.1.1. Inventory Validation as Determined by Gauging or Meter Rotation: Validations of on-hand inventories shall be determined by gauging of fuel bladders or rotation of product through a calibrated meter. If inventory variations between the book and physical inventories are within the established operating gain or loss tolerance for the product, process the verified physical inventory quantity to BSM-E as the closing physical inventory for the month. If the variation between closing book inventory and closing physical inventory exceeds the established operating gain or loss tolerance for the product, an investigation shall be conducted to determine reasons for the excessive gain/loss variance and documented on the DD Form 1348-8 or DESC Form 24. In those instances, the closing physical inventory transaction shall be held (not processed to the BSM-E) pending determination as to reasons for the excessive gain/loss variance. If the excessive variance was due to accounting errors that when corrected bring the variance within allowable tolerances, process the closing physical inventory based on the book inventory quantity. When the excessive gain/loss variance cannot be attributed to an accounting error, processes the closing physical inventory based on the quantity determined by the physical gauge or meter rotation verification.

9.0. **Responsible Officer Appointment**: A Responsible Officer shall be appointed to DESC-FI in writing for each DESC capitalized stock point prior to capitalization according to [DESC-P-7, Accountability and Custodial Responsibilities For Defense Working Capital Fund \(DWCF\) Inventory and Government Property](#). Units should include in required unit out-processing procedures notification to DESC that the former RO is departing the command.

10.0. **BSM-E/FAS Operator**: A primary and alternate person shall be designated for processing of fuel transactions to FAS using the FCC processing application.

10.1. Whenever possible, personnel who are designated as BSM-E/FAS operators shall attend the DESC BSM-E formal training prior to deployment. Course dates can be scheduled by accessing the Army Petroleum Center (APC) web site at <http://usapc.army.mil/>.

10.1.2. Both the primary and back-up person designated for processing transactions to the FAS Enterprise Server (FES) shall submit the required DESC Automated Information System (AIS) System Authorization and Access Request (SAAR) in compliance with [DESC-I-24, DESC System Authorization and Access Request \(SAAR\) Procedures](#) at least 30 days prior to deployment. It is imperative that these designated personnel are granted access to the FES and have a FES User ID and password prior to arrival in theater.

10.1.3. The requirements identified in paragraphs 9.1 and 9.1.2 above is also applicable to personnel deployed during follow-on rotations of personnel.

10.1.4. In the event the tactical DFSP is not able to process their own transactions to BSM-E/FAS, the transactions shall be forwarded to DESC-RR for processing. The following procedures apply:

10.1.4.1. On a daily basis the BSM-E/FAS Operator will build the daily data file by utilizing the EXPORT function within the Accounting Module of the FCC, and will email the data file to the DESC-RRR POC identified in [Appendix 1](#).

10.1.4.2. Twice a month, (1<sup>st</sup> and 15<sup>th</sup>), mail copies of all fuels documents to DESC-RR using the address information at [Appendix 1](#).

11.0 **Internet Connectivity:** Connectivity to the Internet is required in order to process BSM-E transactions and maintain accountability at the deployed location. Contact the DESC Help desk with problems related to internet connectivity.

12.0. **Points of Contact and BSM-E/FAS Assistance:** Deployed personnel requiring assistance related to FAS transaction processing or system problems should contact the BSM-E/FAS Help Desk at DSN: 697-6733/34/35/36/37/38; commercial phone at 800-446-4950; or via email at [bsme.helpdesk@dla.mil](mailto:bsme.helpdesk@dla.mil). Additional contact information is provided at [Appendix 1](#).

Approved:

//original signed//

D. A. ARCHER  
CAPT, SC, USN  
Deputy Director

DESC OPR: DESC-N  
DESC OCR: DESC-TK, RR, RP, Q/QP, ME

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## Appendices

- Appendix 1: [Point of Contact Listing](#)
- Appendix 2: [Receipt Delivery In-Check And Out-Check Procedures](#)
- Appendix 3: [Alternate Quantity Determination for Tank Truck Receipts](#)
- Appendix 4: [Sample DD250](#)
- Appendix 5: [Bulk Fuel Quantity Verification Spreadsheet](#)
- Appendix 6: [Fuel Bladder Gauging Method](#)
- Appendix 7: [Transportation Discrepancy Procedures](#)
- Appendix 8: [Definitions](#)
- Appendix 9: [Additional Service Contractual Requirements](#)

**AP1 APPENDIX 1**  
**POINTS OF CONTACT LISTING**

AP1.1. DESC-ME:

AP1.1.1. Command Section: Commander: Colonel Mark A. Olinger  
Office Phone: +973.17.85.4650  
DSN: 318-439-4650  
Mobile: +973-3-941-8269  
E-Mail: [mark.olinger@dla.mil](mailto:mark.olinger@dla.mil)

AP1.1.2. DESC-ME Inventory Manager: Mr. Jack Whitaker  
Phone: +973.17.85.9397 or DSN 318.439.9397  
Fax: +973.17.85.4655 DSN: 318.439.4655  
Cell: +973.3.941.8767  
E-Mail: [Jack.Whitaker@dla.mil](mailto:Jack.Whitaker@dla.mil)

AP1.2.3. DESC-ME Quality Manager: Mr. William Hendricks  
Cell Phone: +973.17.85.4656  
E-Mail: [William.Hendricks@dla.mil](mailto:William.Hendricks@dla.mil)

AP1.4. Sub-Area Petroleum Office (SAPO): The Quartermaster Group; POC is C OL Hugo Doerschuk; (Cell 00965-721-4785 and Office 00965-389-5440); or contact by email at [hugo.doerschuk@arifjan.arcent.army.mil](mailto:hugo.doerschuk@arifjan.arcent.army.mil).

AP1.5. Files disposition questions may be directed to Mr. Jon Maxwell (DESC-RR), [Jonathan.Maxwell@dla.mil](mailto:Jonathan.Maxwell@dla.mil), Com: 210-925-0260, DSN: 312-945-0260; FAX: (210) 925-9520. The Mailing address for Document Control File and Electronic Data Backup Retention:

DESC-RRR Retail Support Branch  
1014 Billy Mitchell Blvd., Bldg 1621  
San Antonio, TX 78226

AP1.6. Mr. Dan Bard, (DESC-N), DSN: 427-9394, [Dan.Bard@dla.mil](mailto:Dan.Bard@dla.mil); FAX 703-767-9380. |

Defense Energy Support Center  
DESC-N(RO)  
8725 John J. Kingman Rd. Suite 2935  
Fort Belvoir, VA 22060-6222

AP1.7. Recommended changes to this document should be provided to Mr. Randy Beavers (DESC-TKS), DSN 312-427-8633 or via e-mail at [Randy.Beavers@dla.mil](mailto:Randy.Beavers@dla.mil).

AP1.8, Suspected Fraud associated with fuel should be reported to the [DESC Fraud Counsel](#), DESC-G, DSN: 312-427-5020/ and your nearest military criminal investigative organization.

## AP2 APPENDIX 2

### RECEIPT DELIVERY IN-CHECK AND OUT-CHECK PROCEDURES

AP2. The following minimum actions shall be completed to ensure fuel deliveries are properly checked prior to receipt into DWCF managed fuel inventories, and when applicable after off-load of the delivery conveyance is completed. Throughout this procedure the determination of Density/API Gravity is required with Density being the preferred method of determination.

AP2.1. Shipping Documentation: Verification of shipping documentation:

AP2.1.1. Verify that the delivery is to correct delivery location.

AP2.1.2. Verify that correct product is reflected on the shipping document.

AP2.1.3. Verify that conveyance seal numbers (if appropriate for the mode of transport) are reflected on the shipping document.

AP2.1.4. Verify documentation of quality analysis results at origin is provided (where applicable).

AP2.2. Conveyance: Check the conveyance for evidence of theft, tampering, sabotage, leaks, or other obvious safety or quality discrepancies.

AP2.2.1. Verify that seals (if applicable for mode of transport) are not missing, broken or tampered with. Verify that the numbers on installed seals match the seal numbers on the shipping document. Verify that the rings attached to the manifold through which the seals are attached are braised or welded and that the seals cannot be slipped off.

AP2.2.2. Verify that truck hatches are secured and that the screws if any are actually welded and not fake welded so that someone could disassemble the hatch, and remove fuel without tampering with the seals.

AP2.2.3. Verify that the truck does not appear to have any void compartments, false bottoms or hoses running from the fuel storage compartments to the fuel truck saddle tank so that the truck is powered by the fuel from the storage tank.

AP2.2.4. Verify that the dipping ports are not sealed and that there is fuel in the storage tanks instead of only the dipping port containing fuel. Or that there is not a bowl added below the dipping port to enable a false measurement being taken because the dipping port thereby extends below the level of the fuel storage tank. (See paragraph AP3.3.3.2 instructions)

AP2.3. Product: Verify that product delivered is product ordered.

AP2.3.1. Verify that the product markings on the conveyance match product shown on the shipping document.

AP2.3.2. Obtain an all-level sample from each tank compartment and perform a visual analysis for color, water and sediment.

AP2.3.3. Obtain a representative temperature and Density/API Gravity of the product in the delivery conveyance. Ensure API density is within the appropriate range for product ordered.

AP2.3.4. Obtain samples for laboratory analysis on a random basis or in accordance with DoD/Military Service directives to ensure product specification requirements are met.

AP2.4. Receipt Quantity Determination:

AP2.4.1. Opening Measurements: Obtain opening (before receipt) measurements using one of the following approved methods.

AP2.4.1.1. Calibrated Conveyance Meter: For conveyance modes with calibrated off-loading meters, ensure the meter register is reset to zero and annotate the totalizer meter reading on the [DESC Form 702](#), Petroleum Daily Receipt Summary prior to commencing receipt.

AP2.4.1.2. Conveyance Gauge: For conveyance modes with certified gauging charts, obtain gauge measurements from the conveyance if conveyance gauge reading is used for quantity determination. Annotate gauge readings, temperature and Density/API Gravity, and converted quantity on the DESC Form 702, Petroleum Daily Receipt Summary.

AP2.4.1.3. Calibrated Receipt Meter: If receipt quantity is determined using calibrated meter, ensure meter register is reset prior to commencement of the receipt. Annotate the totalizer meter reading on the DESC Form 702, Petroleum Daily Receipt Summary. If receipt quantity is determined using a calibrated temperature compensating meter, reset the meter totalizer and density prior to commencing the receipt. Annotate the totalizer meter reading, product temperature, and Density/API Gravity on the DESC Form 702, Petroleum Daily Receipt Summary.

AP2.4.1.4. Weigh Scale: If receipt quantity is determined or verified using a calibrated scale, obtain weight of conveyance prior to off load. Annotate weight, temperature and Density/API Gravity, and converted quantity on the DESC Form 702, Petroleum Daily Receipt Summary. Be vigilant to ensure that the contractor is not adding or removing parts of the truck to increase the weight of the truck before and after weigh in. Also, be careful to ensure that the contractor has not loaded water in lieu of fuel to increase the weight of the load.

AP2.4.1.5. Receipt Tank Gauge: When other receipt quantity determination or verification methods are not available at the receiving location, obtain opening (before receipt) gauge readings, temperature and Density/API Gravity from the receipt tank. Annotate the gauge measurements, temperature and Density/API Gravity, and converted quantity on the DESC Form 702, Petroleum Daily Receipt Summary.

AP2.4.2. Receive Product: Upon completion of off-load, verify that conveyance compartments are emptied of product. Look for evidence fraud such as false tank bottoms, isolated compartments or bulk heads, etc. Annotate any such observations on the DD Form 250. Notify DESC of any such observations immediately.

AP2.4.3. Closing Measurements: Obtain closing meter reading, weight, or receipt tank gauge readings. Annotate readings and converted quantity on the DESC Form 702, Petroleum Daily Receipt Summary.

AP2.4.4. Compute In-Transit Variance: Compute the quantity variance between quantity shipped as reflected on the shipping document and quantity determined at destination.



### AP3 APPENDIX 3

#### Alternate Quantity Determination for Tank Truck Receipts

AP3.0. **Measure Temperature:** Commercial Receipts in Afghanistan require the use of Density Hydrometers and Celsius Thermometers. Place a suitable temperature measuring device in the middle of each compartment to be unloaded. A suitable temperature measuring device is defined as either a cup case thermometer or Portable Electronic Thermometer (PET) meeting the requirements of the Manual of Petroleum Measurement Standards (MPMS) Chapter 7-Temperature determination. Allow the thermometer to come to equilibrium with the fuel (5 minutes for cup case thermometers and manufacturers recommendation for a PET). Read the temperature of the thermometer within  $\pm 15$  minutes of performing the truck quantity measurement. Record the temperature of each compartment in the appropriate location in the spreadsheet provided in [Appendix 5](#).

AP3.1. **Cup-case (mercury in glass) Thermometers:** Before the initial use of any mercury in glass thermometer and at least once a year after its initial use, each thermometer shall be compared to a thermometer certified by the National Institute of Standards and Technology (NIST) or an equivalent thermometer of traceable accuracy. The comparison shall be made at three or more temperatures to ensure that the thermometer is accurate within the limits given in Table 8 of MPMS Chapter 7-Temperature Determination. Typically, the checkpoints should be at 10%, 50%, and 90% of the temperature range in which the thermometer is expected to be used.

AP3.2. **Portable Electronic Thermometers (PETs):** Before initial use, and at least once a year thereafter, each PET shall be re-standardized in a laboratory or other qualified calibration facility. The PET shall be compared at three or more temperature points, near the midpoint and ends of the range, with either a National Institute of Technology (NIST) certified reference thermometer or an equivalent thermometer with accuracy traceable to the NIST. The PET shall be calibrated in accordance with the manufacturer's instructions. These standardization checks will ensure that accuracy is maintained within the limits given in Table 3 of MPMS Chapter 7-Temperature Determination.

#### AP3.3. **STEP BY STEP DESTINATION RECEIPT PROCEDURES:**

AP3.3.1. Tank truck documentation will be reviewed to verify correct destination and product.

AP3.3.2. Tank truck seal numbers will be verified against those annotated on the DD250. Seals should not be removed until the seal numbers have been verified. If seals are missing then contents of the truck will be sampled and tested to verify it conforms to the product as shipped.

AP3.3.3. Tank trucks will then be sampled, gauged for water and product, temperatures taken and a bottom sample checked for contamination. **These procedures will be performed on a level grade with sufficient time allowed for fuel to both settle and for movement to stop.**

AP3.3.3.1. The gauging of water in tank compartments will be performed using water paste.

AP3.3.3.2. Inspect the dip port for evidence of tampering or modification to falsify gauge readings. If no tampering or modification exists, gauge the tank compartments through the **dip port**. However, if there is evidence that the dip port has been tampered with, e.g. dip tube inserted, plate or device installed that would skew gauge readings and make accurate reading impossible; then the tank truck will be gauged (dipped) through an alternate location such as the manhole. The location for the alternate gauge reading must allow for the most accurate gauge reading possible. The truck will also be metered and both the gauge (dip) reading and metered off-load (before and after meter readings) documented on the DD Form 250. Use the meter quantity

volume corrected to 15°C as the receipt transaction quantity. Additionally, document the details of the incident to include noted discrepancies and the receipt transaction quantity determination method used on DD Form 361, Transportation Discrepancy Report. Photographs showing the evidence of tampering or fraud must also be provided where possible.

AP3.3.3.3. Tank compartments will be all-level sampled for required testing. Individual tank truck compartment samples will be composited prior to testing. This testing will include determination of Density, correction of the Density to 15°C and the Volume Correction Factor (VCF).

AP3.3.3.4. The gauging of tank compartments for product will be performed with product paste.

AP3.3.3.5. Tank compartments reference height will be verified when performing water and product gauges. Reference heights should be within one mm of the annotated gauge height on the DD Form 250. This reflects the gauge height annotated on the tank truck trailer calibration documentation.

AP3.3.3.6. A temperature will be taken from each tank compartment and averaged.

AP3.3.3.7. A bottom sample from each compartment will be checked for water and sediment.

AP3.3.4. Prior to discharge any discrepancy noted between load and receipt point reference dip heights of over 1 mm and/or dip gauges of 3% or over should be investigated and annotated on the DD Form 250. Additionally, any other deficiencies noted should be annotated on the DD Form 250.

AP3.3.5. Tank truck fittings will be attached by the contractor and the connection and tightness verified.

AP3.3.6. Temperature Compensating Meters, if available, will be reset to zero and ancillary equipment set to the manufacturer's specified requirements.

AP3.3.7. After completion of the tank truck discharge "all" compartments will be verified as being empty by visually inspecting each compartment and the meter reading annotated.

AP3.3.8. The compartment dip calculations will be performed and annotated on the DD Form 250 as detailed in the below "Compartment Dip Calculations."

AP3.3.9. It is important that each tank truck be closely scrutinized both before discharge and after discharge for any alterations to the tank truck which could result in significant losses of fuel. Fuel receiving officials should be alert for the following possible alterations or indicators of fraud.

AP3.3.10. Before Discharge: Seals numbers do not match the seal numbers annotated on the DD Form 250. Seals appear to have been tampered with or altered. Seal attachment points have been cut and filled with filler to appear normal. Manhole fasteners have been tampered with or altered to allow removal without the breaking of the seal. Bottom suction aligns with dip port to register false reading; this is normally associated with the internal compartment wall being altered. Dip port tube altered or an insert added to give a false reading (see paragraph AP3.3.3.2 instructions if dip/gauge port has been tampered with). Rings to which the manifold lids are attached and through which the seals are inserted are not braised or welded and one can slip the intact seal through the "split ring" and remove the lid to the manifold and discharge the product without disturbing the seal.

AP3.3.11. After Discharge: The first compartment emptied contains fuel after second compartment is emptied which may indicate that holes have been drilled in compartment walls. Internal visual inspection shows other than normal construction; such as compartment walls with drilled holes or partially missing walls.

AP3.3.12. If the difference between the dip reading and the meter is over 3%, which may indicate a false compartment, an investigation should be initiated. If available, such as at Bagram AB, the truck should be X-rayed. All discrepancies should be annotated on the DD Form 250 and immediately reported to both the DCST and DESC Middle East Operations.

### AP3.4. COMPARTMENT GAUGE/DIP CALCULATIONS:

Note: Items 1- 11 refers to the gauge/dip calculations and item 12 refers to the meter reading calculation on the example DD Form 250 in [Appendix 4](#).

AP3.4.1. In block 23 (left side bottom of the form) of the example DD Form 250 listed are the product dip measurements from the loading point. A truck can have from one to four compartments; however, in this DD Form 250 example there are only two compartments.

AP3.4.1.1. [Item 1](#) is the dip readings and quantity of fuel in liters per compartment at ambient temperature with these figures representing the tank compartment calibration chart data.

AP3.4.1.2. [Item 2](#) has additional spaces provided for the receiving dip readings and quantity per compartment to be annotated.

AP3.4.2. Determine the average temperature of the tank compartments and document as [Item 3](#). Sample and test the fuel for Density @ observed temperature. This information is then used to convert to Density @ 15°C and the Volume Correction Factor (VCF) utilizing the ASTM D1250 Tables 53B & 54B.

AP3.4.2.1. a) Place a calibrated hydrometer into the cylinder and read the Density @ Observed temperature and annotate this as [Item 4](#).

AP3.4.2.2. b) Using the average tank temperature ([Item 3](#)) and the Density and Observed Temperature ([Item 4](#)) calculate both the corrected Density @ 15°C annotated as [Item 4a](#) and the Volume Correction Factor (VCF) annotated as [Item 5](#).

AP3.4.3. Determining Dip Measurement Gross Quantities:

AP3.4.3.1. After taking the product measurement in mm with the dip stick ([Item 2](#)) divide the quantity of fuel indicated in liters at the load point ([Item 1](#)) by the product measurement in [Item 2](#). The resultant number is the number of liters per mm ([Item 2a](#)).

Example:

First Dip: 22,000 liters / 1590 mm = 13.84 liters per mm

Second Dip: 22,000 liters / 1600mm = 13.75 liters per mm

AP3.4.3.2. Take the difference of the load and receipt dip readings, either positive or negative, multiply this result by the liters per mm to give you the quantity in liters for the difference. This is then added to or subtracted from the load quantity. These results are placed in [Item 6](#).

Example:

First Dip: 1605 mm (load) and 1590 mm (receipt) = -15 mm x 13.84 liters per mm = - 208 liters and 22,000 liters - 208 liters = 21,792 liters.

Second Dip: 1625 mm (load) and 1600 mm (receipt) = - 10 mm x 13.75 liters per mm = - 343 liters and 22,000 liters - 343 liters = 21,656 liters.

AP3.4.3.3. Determine the total decanted by adding the dips from [Item 6](#) and annotate the result in [Item 7](#).

Example: 21,792 liters + 21,656 liters = 43,448 liters.

#### AP3.4.4. Determining Dip Measurement Net Quantities:

AP3.4.4.1. The net quantity is determined by multiplying the total gross quantity annotated in [Item 7](#) by the VCF ([Item 5](#)). This is the total net quantity received in liters. Calculate net quantity in gallons @ 15°C by multiplying net liters by 0.264172 and annotate as [Item 9](#).

Example: 43,448 liters x 0.9966 = 43,300 liters (item 8) and 43,300 liters x 0.264172 = 11,439 USG (item 9).

#### AP3.4.5. Determining Difference between Quantity Shipped and Received:

AP3.4.5.1. The net quantity loaded in liters ([Item 10](#)) is subtracted from the net volume received in liters ([Item 8](#)) and this liter figure ([Item 11](#)) multiplied by 0.264172 to obtain gallons ([Item 11](#)). These quantities will be annotated in both blocks 23 and 19 of the DD250 (see [Item 11](#)).

Example: 43,850 – 43,330 = - 550 liters x 0.264172 = - 145 gallons. Calculate percentage by -145 gallons / 11,584 gallons (load) x 100 = - 1.25%. It should be noted that these figures could be a plus or minus.

#### AP3.4.6. Determination of Meter Reading in Liters:

AP3.4.6.1. Document Temperature Compensated Meter (TCM) reading and multiply by 0.264172 to give you net gallons and annotate as [Item 12](#).

Example: 43,400 liters x 0.264172 = 11,465 gallons.

AP3.4.7. The preferred method for the determination of quantity is the use of the metric system and density. This directly correlates to the method being used at source and to the DD250 documentation. However, until such time as the density hydrometers and Celsius thermometers are available and where API hydrometers and Fahrenheit thermometers are used then the following procedures should be followed:

AP3.4.7.1. Convert the API @ observed temperature Fahrenheit to API @ 60°F by using ASTM D1250 Tables 5B & 6B. The API @ 60°F will be converted to Density @ 15°C using ASTM D1250, Volume XI, Table 3. Fahrenheit temperatures will be converted to Celsius by using ASTM D1250, Volume XI, Table 2. This converted data along with ASTM D1250, Table 54B will be used to determine the Volume Correction Factor. Approved computer generated tables are acceptable.

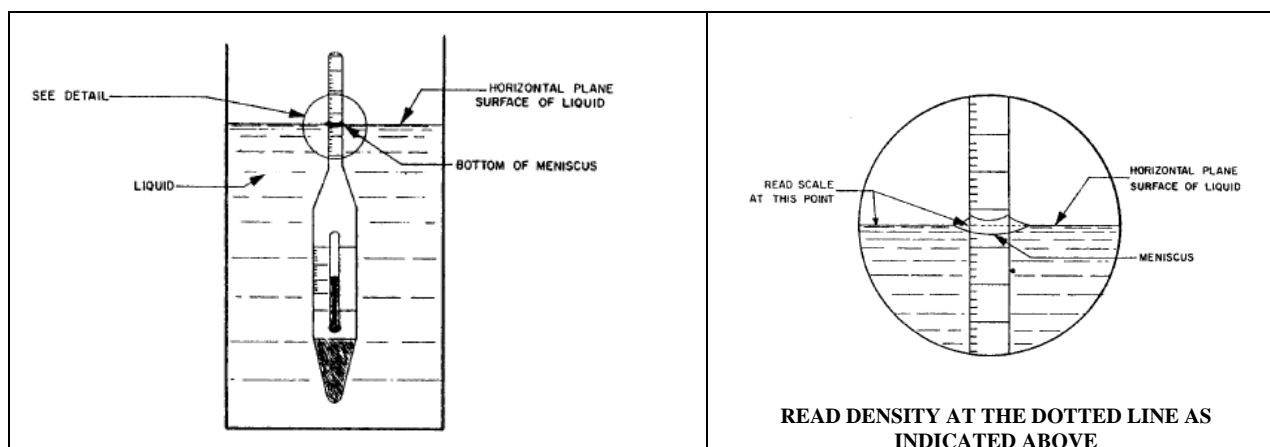
#### AP3.4.8. Required additions to the DD250:

- (1) Add space for reference height for each compartment. Ref Height \_\_\_\_\_
- (2) Add space for reference height for each compartment. Ref Height \_\_\_\_\_
- (3) Truck Temp: \_\_\_\_\_ C
- (12) Meter: \_\_\_\_\_ LTRS x 0.264172 = \_\_\_\_\_ USG

AP3.5. **Determine Observed Density or API Gravity:** Using the sample(s) obtained above, determine the Density or API of a composite sample of each individual tank truck in accordance with ASTM D 1298, *Standard Test Method for Density, Relative Density (Specific Gravity), or API Gravity of Crude Petroleum and Liquid Petroleum Products by Hydrometer Method* and record the observed Density or API of the product of the composite on [Appendix 5](#) as the observed Density or API. Density results can be directly recorded on [Appendix 4](#) while the observed API results will need to be converted to API at 60°F and then to Density at 15°C in



accordance with AP3.5.2 prior to recording on [Appendix 4](#). (See the below diagram for reading hydrometers). Temperature of the fuel inside the hydrometer cylinder will be taken IAW the above stated test method as well. This should not be confused with the temperature taken from the truck.



**AP3.5.1 Determine Density at 15° C or API at 60°F:** Using the observed temperature and Density or API obtained in paragraph AP3.5, determine the Density at 15° C by using table 53B or API at 60°F using table 5B. Find the appropriate observed Density and the corresponding observed temperature and enter the resultant Density at 15° C on [Appendix 4](#) and [Appendix 5](#). If API at 60° F was determined it will need to be converted to Density at 15° in accordance with AP3.5.2 before annotating on [Appendix 4](#) and [Appendix 5](#).

**AP3.5.2.** Convert from API to Density for purpose of product comparison using MPMS Chapter 11.1, Volume XI/XII-Intra-conversion Between Volume Measures and Density Measures to convert API Gravity at 60° F to Density at 15° C (Volume XI Table 3).

**AP3.5.3. Determine Metric Volume Correction Factor:** Use table 54B to determine the VCF to be used to adjust “Net Quantity Uncorrected” to “Net Quantity Corrected” by using the Density and temperature of the tank/lorry compartment find the resultant volume correction factor and enter it onto [Appendix 4](#) and [Appendix 5](#) where it says “Volume Correction Factor.”

**AP3.5.4. Determine Net Volume:** Multiply the net quantities uncorrected by the correction factor obtained above and enter that as the “Net Quantity Corrected” for the compartment on [Appendix 4](#) and [Appendix 5](#) where it says “Net Quantity Corrected (liters).”

APPENDIX 4  
DD 250 to be used with Appendix 3

MATERIAL INSPECTION AND RECEIVING REPORT										Form Approved OMB No: 0704-0248			
<p>The public reporting burden for this collection of information is estimated to average 30 minutes per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0248), 1215 Jefferson Drive Highway, Suite 1204, Arlington VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.</p> <p>PLEASE DO NOT RETURN YOUR COMPLETED FORM TO EITHER OF THESE ADDRESSES SEND THIS FORM IN ACCORDANCE WITH THE INSTRUCTIONS CONTAINED IN THE DFARS, APPENDIX F-401.</p>													
1. PROJ. INSTRUMENT IDEN. (CONTRACT) NO. 8P0000-05-D-0495			2. ORDER NUMBER 2539-02		3. INVOICE NO. / DATE RT36/06		4. PAGE OF 1 1		5. ACCEPTANCE POINT D				
6. SHIPMENT NO. BGM29		7. DATE SHIPPED 31-Jan-06		8. B/L TCN:		9. DISCOUNT TERMS							
10. PRIME CONTRACTOR CODE CALTEX TRADING AND TRANSPORT CORP CALTEX ALKHALI DIVISION PO BOX 2155 DUBAI UNITED ARAB EMIRATES				11. ADMINISTERED BY CODE DEFENSE ENERGY SUPPORT CENTER 8715 JOHN KINGMAN ROAD SUITE 2941 FT. BELVOIR, VA 22060-6221				12. HQ0104					
13. SHIPPED FROM (if other than 9) CODE CALTEX OIL (PAKISTAN) LIMITED RAWALPINDI TERMINAL RAWALPINDI, PAKISTAN				14. FOB: CODE DEFENSE FINANCE AND ACCOUNTING STOCK FUND DIRECTORATE, FUELS ACCOUNTING AND PAYMENTS DIVISION ATTN: DFAS-CO-LISA, COLUMBUS, OH 43213-1152 3990 EAST BROAD STREET, BUILDING 21				15. PAYMENT WILL BE MADE BY CODE					
16. SHIPPED TO CODE BAGRAM AIR BASE BAGRAM, AFGHANISTAN				17. MARKED FOR CODE				18. CODE					
19. ITEM NO.		20. STOCK/PART NO. (Indicate number of shipping containers - type of container - container number)		21. DESCRIPTION		22. QUANTITY SHIP/RECD*		23. UNIT		24. UNIT PRICE		25. AMOUNT	
0501		9140-01-526-5493 Pakistan Diesel (PAD) TAK # TLC-999 EC READING NA SERVICE TANK DENSITY @ 15C 0.8426 TANK TRUCK OBSERVED DENSITY 0.837 TANK TRUCK DENSITY @ 15C 0.8398 TANK TRUCK OBS TEMP 19 °C VCF 0.9966 GROSS LITERS 44000 LTRS BATCH# PR0044RT06-106/01/06-003		11,584 ⑩ 43,850 11,439 ⑨		15C NET USG at 15C NET LITERS ⑪ -145 USG 1.25%							
26. CONTRACT QUALITY ASSURANCE a. ORIGIN <input checked="" type="checkbox"/> CQA <input type="checkbox"/> ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents. DATE 31-Jan-06 SIGNATURE OF AUTH GOVT REP TYPED NAME NIAZ-ABDOL AND OFFICE Liaison Officer COMMERCIAL TELEPHONE NUMBER				b. DESTINATION <input type="checkbox"/> CQA <input checked="" type="checkbox"/> ACCEPTANCE of listed items has been made by me or under my supervision and they conform to contract, except as noted herein or on supporting documents. DATE SIGNATURE OF AUTH GOVT REP TYPED NAME AND OFFICE COMMERCIAL TELEPHONE NUMBER				27. RECEIVER'S USE Quantities shown in column 22 were received in apparent good condition except as noted. DATE SIGNATURE OF AUTH GOVT REP TYPED NAME AND OFFICE COMMERCIAL TELEPHONE NUMBER *If quantity received by the Government is the same as the quantity shipped, indicate by (X) mark. If different, enter actual quantity received below quantity shipped.					
28. CUSTOMER USE ONLY SERIAL NUMBERS No of seals (1) 200020841-00020842-00020843-00020844-00020845-00020846-00020847-00020848-00020849-00020850-00020851-00020852				29. TANK LORRY CONTRACTOR REPRESENTATIVE: SIGNATURE: DATE:									
① DIP READINGS AT LOADING POINT PROD. DIP #1: 1605 MM 22000 LTRS AVERAGE LITE # 13.71 PROD. DIP #2: 1625 MM 22000 LTRS AVERAGE LITERS/MM 13.54 PROD. DIP #3: MM AVERAGE LITERS/MM #DIV/01 PROD. DIP #4: MM LTRS AVERAGE LITE #DIV/01				② DIP READINGS AT RECEIVING POINT PROD. DIP #1: 1590 MM 21792 LTRS ② 13.84 PROD. DIP #2: 1600 MM 21656 LTRS ⑥ 13.75 PROD. DIP #3: MM LTRS mm dif: MM LTRS PROD. DIP #4: MM LTRS mm dif: TOTAL 43448 LTRS				DATA AT RECEIVING POINT TRUCK TEMP 19C OBSERVED DENSITY .8370 @ 19 DEG C CORRECTED DENSITY AT 15C (OBTAIN FROM TABLE 53B) .8398 VOLUME CORRECTION FACTOR .9966 (OBTAIN FROM TABLE 54B) NET QUANTITY AT 15 C 43300 LTRS NET GAIN / LOSS -550 LTRS -145 USG					

DD FORM 250, AUG 2000 (27)

PREVIOUS EDITIONS IS OBSOLETE ⑦

⑫ Meter 43400 LTRS x 0.264172 11,465 USG

AP5 Appendix 5  
Fuel Quantity Verification Spreadsheet  
[Click Here](#)

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	
1	CONTRACT NUMBER:					ORDER NUMBER:							SHIPMENT NUMBER:					
2	TRUCK NUMBER:																	
3	DIP READINGS AT LOAD POINT					DIP READINGS AT RECEIPT POINT												
4		MM			Step 3e	MM	DIFF											
5	REF DIP 1	1720			REF DIP 1	1720	0	Step 4										
6	REF DIP 2	1700			REF DIP 2	1700	0											
7	REF DIP 3				REF DIP 3													
8	REF DIP 4				REF DIP 4													
9		MM	LTRS		Steps 3b,c,d	MM	MM H2O	PRODUC	LTRS/MM	DIFF	LTRS SUBTOTAL						DIP %	
10	PROD DIP 1	1605	22000		PROD DIP 1	1590	0	1590	13.84	-15	-208	21792					0.9	
11	PROD DIP 2	1625	22000		PROD DIP 2	1600	0	1600	13.75	-25	-344	21656					1.5	
12	PROD DIP 3				PROD DIP 3													
13	PROD DIP 4				PROD DIP 4													
14													DIP GROSS	DIP NET TOTAL	LOAD DD250	DIFF LTRS	DIFF GALS (2) %	
15					TOTAL	Step 3f							43449	43301	43850	-549	-145 -1.3	
16						C	F											
17					TEMP 1	19.0												
18					TEMP 2	19.0												
19					TEMP 3													
20					TEMP 4													
21					AVERAGE	19.0												
22	RECEIPT API/DENSITY AND VOLUME CORRECTION FACTOR					NON-TEMPERATURE COMPENSATED METER					TEMPERATURE COMPENSATED METER					DIFFERENCE		
23	OBSERVED TEMPERATURE				Step 3a	C	F	GROSS METER OPEN	GROSS METER CLOSE	DIFF	NET METER LITER	NET METER LITER	NET METER GAL	LOAD DD250		DIFF GALS	(1) % DIFF	
24	OBSERVED DENSITY	0.837			@	19.0		Step 6	Step 7			43400	11465	11584		-119	-1.0	
25	OBSERVED API				@			43548	87096	43548		43400	11465	11584		-119	-1.0	
26					TABLE 53B (15C)	TABLE 5B (60F)						NET METER	NET DIP LITER			DIFF LTRS	(3) %	
27	CORRECTED DENSITY @ 15C				0.8398							42687	42640			47	0.1	
28	CORRECTED API @ 60F																	
29	API CONVERTED TO DENSITY PER TABLE 3																	
30					TABLE 54B	TABLE 6B												
31	VOLUME CORRECTION FACTOR (VCF)					0.9966											(1) Metered Transportation Variation	
32	VOLUME CORRECTION FACTOR (VCF)																(2) Dipstick Transportation Variation	
33	VCF BASED ON DENSITY PER TABLE 3																(3) Dipstick/Meter Variation	
34	VOLUME CORRECTION FACTOR (VCF) FROM 54B OR 6B					0.9966												
35																		
36																		
37																		
38																		
39																		
40																		
41																		

Sheet1 / Sheet2 / Sheet3 /

## AP6 Appendix 6

### AP6.1. Fuel Bladder Gauging Methodology

1. Gauging of fuel bladders to certify physical inventory of fuel stored in fuel bladders shall include the following minimum requirements:

**CAUTION: Fuel Managers shall ensure appropriate personnel safety measures are enforced when gauging fuel bladders.**

1.1. Fuel bladders shall have a certified gauge chart. See [Attachment 1](#) example of manufacturers certified gauge chart. Tactical DFSPs that can not obtain a manufacturer's certified gauge charts for their fuel bladders shall develop a local gauge chart during the initial fill of the bladder(s). The gauge chart shall be developed by metering receipts into the empty bladder(s) using a calibrated meter and recording the metered in quantity at each three inch increase in the fuel level as measured at the single point gauge measurement discussed in [Attachment 4](#). Recommend using the Microsoft Excel Spreadsheet provided via hyperlink at [Attachment 5](#) of this appendix. The provided spreadsheet will automatically extrapolate the fuel quantities to one-eight increments once the metered quantity at each three inch increment is entered. Locally developed gauge charts shall be certified by the RO/Terminal Manager. The manufacturer's certified gauge calibration chart or when necessary, the certified locally developed bladder calibration chart shall be used for all subsequent monthly physical inventory verifications discussed herein.

1.2. Fuel bladder gauging shall be accomplished using a calibrated gauge pole, line level and lanyard to determine the fuel level as shown in [Attachment 2](#) to this appendix. The gauge pole shall be graduated in foot, inch, and one eighth inch increments.

1.2.3. During the initial fill of a fuel bladder, the metered in quantity using a calibrated meter shall be annotated when the fuel level at the center point of the fuel bladder reaches three inch (3"). The center point gauge method shall be accomplished as shown in attachments 2 and 4 to this appendix. The metered in fuel inventory at the one inch center gauge point shall be documented and used as a reference for future fuel inventory determinations when the fuel level reaches the one inch level at the center gauge point. Fuel bladders should not be pumped lower than one inch at the center gauge reference unless mission requirements dictate.

1.2.4. Consideration shall be given to the layout and slope of the fuel bladder berm when determining the appropriate reference points for measuring the fuel level in each fuel bladder. The DFSP RO/Terminal Manager shall determine the appropriate method, four point gauge method or single point gauge method as discussed below and as shown in appendices 3-4.

1.2.4.1. Step 1: Determine the fuel depth at each side of the fuel bladder as shown in [Attachment 3](#).

1.2.4.2. Step 2: Enter the measurements taken in steps 1 into the appropriate cells of the Excel Spreadsheet at [Attachment 3](#). The spreadsheet will automatically compute the average 4-point gauge.

1.2.4.3. Step 3: Determine the individual gauge reference point that is closest to the average of the 4-point gauge measurements determined in step 2.

1.2.4.3.1. If the gauge reference point closest to the average 4-point gauge measurement is equal to or within ½ inch of the average 4-point measurement, use that reference point to determine the physical inventory for all subsequent physical inventory measurements for that bladder.

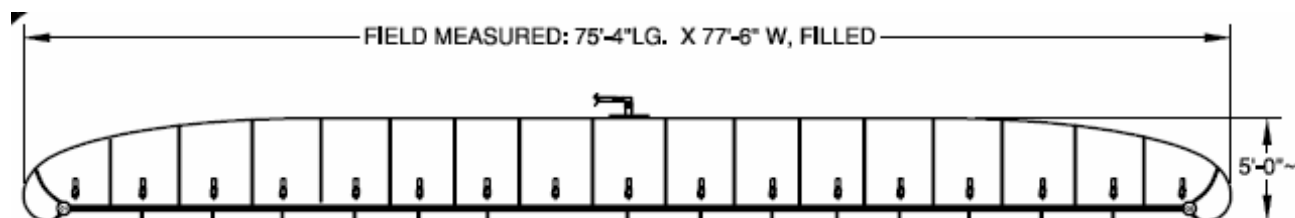
1.2.4.3.2. If none of the individual 4-point gauge measurements is within ½ inch of the average 4-point measurement, you must continue to obtain an average of the 4-point gauge measurement to determine the physical inventory on all subsequent physical inventory measurements of that bladder.

1.3. The berm floor at the required gauge reference points shall be stabilized to prevent erosion or shifting of the reference point. Stabilization may be accomplished by firmly compacting the berm floor at the reference point; or by installation of a metal, wooden or masonry plate at the reference point.

1.4. To maximize accuracy of fuel bladder physical inventory gauge readings, gauge measurements should be taken at the same time of day and by the same individual wherever possible. To avoid distortion of physical gauge reading due to thermal expansion, recommend the physical gauge readings be accomplished in the early morning hours.

1.5. Convert the fuel level as determined in appropriate gauge method above to gallons using the certified gauge chart for the bladder.

Attachment 1: Certified fuel bladder strapping/gauge chart (200K Gallon) Example Only, not to be used for determining quantities.



**200K SOFT-SHELL TANK**

FILL HEIGHT	TANK GALLONS	FILL HEIGHT	TANK GALLONS	FILL HEIGHT	TANK GALLONS	FILL HEIGHT	TANK GALLONS	FILL HEIGHT	TANK GALLONS	FILL HEIGHT	TANK GALLONS
0.000	X	4.000	15,503	8.000	31,014	12.000	46,156	16.000	60,232	20.000	73,820
.125	X	.125	15,987	.125	31,497	.125	46,641	.125	60,669	.125	74,240
.250	X	.250	16,472	.250	31,982	.250	47,135	.250	61,081	.250	74,652
.375	X	.375	16,957	.375	32,467	.375	47,731	.375	61,511	.375	75,073
.500	X	.500	17,442	.500	32,952	.500	48,368	.500	61,930	.500	75,494
.625	X	.625	17,927	.625	33,437	.625	48,828	.625	62,367	.625	75,906
.750	X	.750	18,411	.750	33,921	.750	49,178	.750	62,797	.750	76,318
.875	X	.875	18,896	.875	34,406	.875	49,598	.875	63,218	.875	76,739
1.000	X	5.000	19,381	9.000	34,891	13.000	50,088	17.000	63,664	21.000	77,151
.125	X	.125	19,865	.125	35,376	.125	50,561	.125	64,091	.125	77,555
.250	X	.250	20,350	.250	35,859	.250	51,008	.250	64,545	.250	77,976
.375	X	.375	20,835	.375	36,344	.375	51,400	.375	64,973	.375	78,404
.500	X	.500	21,319	.500	36,831	.500	51,786	.500	65,385	.500	78,823
.625	X	.625	21,803	.625	37,316	.625	52,171	.625	65,807	.625	79,245
.750	X	.750	22,289	.750	37,799	.750	52,602	.750	66,245	.750	79,666
.875	X	.875	22,774	.875	38,283	.875	53,046	.875	66,657	.875	80,078
2.000	X	6.000	23,259	10.000	38,768	14.000	53,509	18.000	67,085	22.000	80,472
.125	X	.125	23,744	.125	39,253	.125	53,930	.125	67,558	.125	80,868
.250	X	.250	24,228	.250	39,738	.250	54,314	.250	67,972	.250	81,282
.375	X	.375	24,713	.375	40,223	.375	54,726	.375	68,365	.375	81,702
.500	X	.500	25,198	.500	40,708	.500	55,156	.500	68,784	.500	82,135
.625	X	.625	25,683	.625	41,193	.625	55,577	.625	69,197	.625	82,560
.750	X	.750	26,166	.750	41,678	.750	55,962	.750	69,608	.750	82,965
.875	X	.875	26,651	.875	42,161	.875	56,357	.875	70,029	.875	83,377
3.000	11,674	7.000	27,138	11.000	42,556	15.000	56,803	19.000	70,458	23.000	83,796
.125	12,111	.125	27,620	.125	43,003	.125	57,222	.125	70,877	.125	84,217
.250	12,595	.250	28,105	.250	43,480	.250	57,624	.250	71,290	.250	84,639
.375	13,080	.375	28,590	.375	43,850	.375	58,017	.375	71,708	.375	85,059
.500	13,565	.500	29,075	.500	44,322	.500	58,428	.500	72,127	.500	85,462
.625	14,050	.625	29,560	.625	44,810	.625	58,884	.625	72,548	.625	85,868
.750	14,535	.750	30,045	.750	45,282	.750	59,348	.750	72,969	.750	86,290
.875	15,020	.875	30,530	.875	45,719	.875	59,785	.875	73,391	.875	86,710



## Attachment 2: Fuel Bladder Gauge Method (Center of Bag Gauge Reading)



Parachute cord

- Securely attach parachute cord to base of vent stack to ensure it will not move.

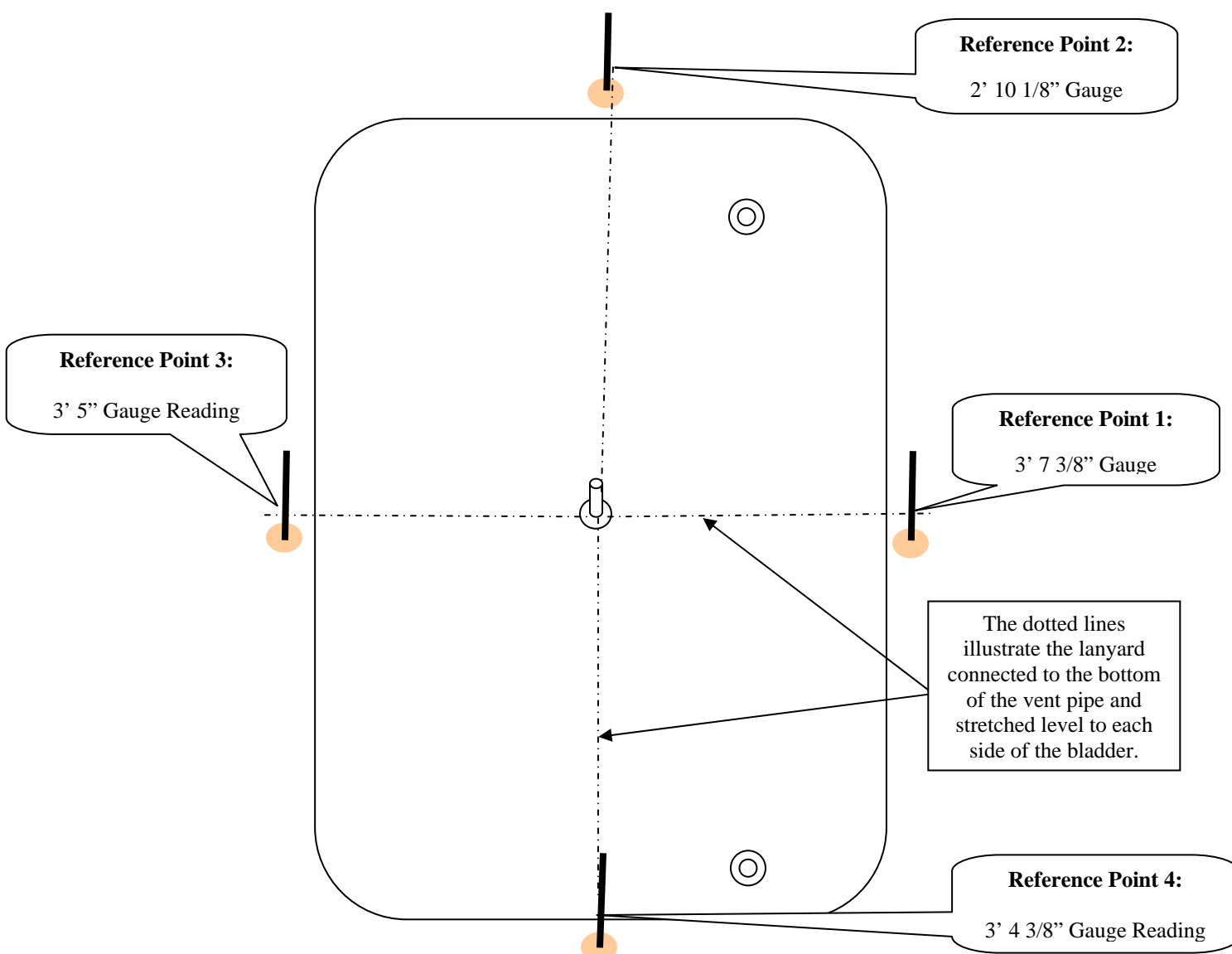


- Pick and mark a spot next to the bladder perpendicular to the vent stack
- This is where the gauging stick is placed each time for consistency



- Place gauging stick on mark and attach line level to parachute cord
- Pull line taut and adjust until level; read height on gauging stick

### Attachment 3, Four Point Gauge Method (Average Fuel Level)

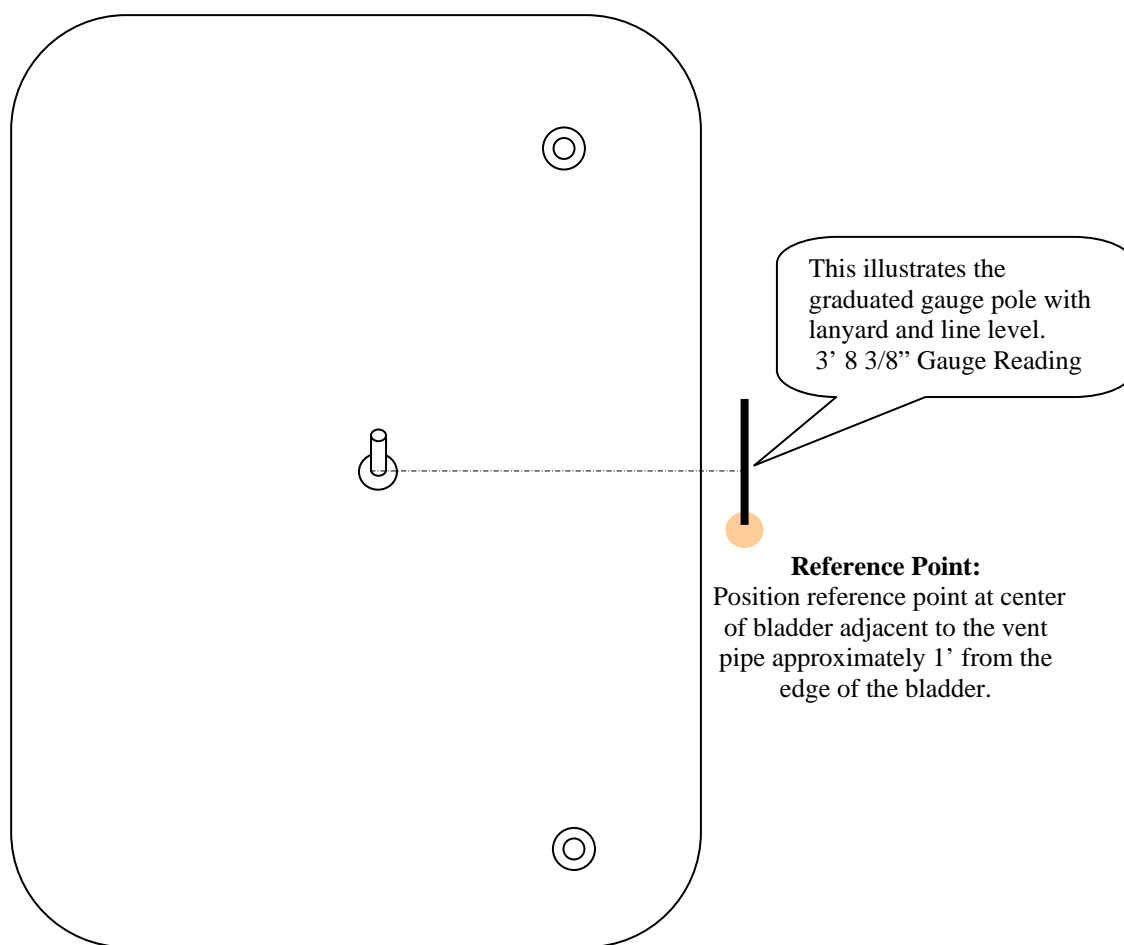


[Excel Spreadsheet to Determine Bladder Gauge Method](#)

### Worksheet for Determining appropriate Bladder Gauge Method

<b>DFSP Name and DODAAC:</b>					
<b>Bladder Site/Number:</b>					<b>Date:</b>
<p>Enter the gauge readings for the 4 points and center point in appropriate green shaded cells. Enter feet in column B, inches in column C and eight inches in column D). The spreadsheet will automatically calculate the average measurement. Compare average measurement with individual measurements and select reference point closest to average as future gauge reference point. Note: To use a single reference point on subsequent physical inventory gauge measurements, the closest individual measurement must be within 1/2 inch of the average of the 4-point gauge measurements. Otherwise use of the 4-point average method is required.</p>					
Gage Point	Feet	Inches	Eight Inches	Total Eights	Average Eights
1	3	8	3	355	354
2	3	6	1	337	
3	3	8	0	352	
4	3	10	3	371	
<b>RESULT:</b>	<b>USE Reference Point 1</b>				

## Attachment 4, Single Point Gauge Method



## Attachment 5

### Locally Developed Fuel Bladder Gauge Chart ([Use the Excel Spreadsheet Version](#))

#### Tactical Fuel Bladder Gauge Calibration Chart (Page 1 of 2)

*(Use this spreadsheet to locally develop a bladder gauge chart for each tactical bladder with DWCF fuel inventory. During the initial fill of the bladder, enter the quantity at each one inch (1") increment as measured at the bladder center point as discussed in Appendix 4. The spreadsheet will automatically calculate the one e.*

	Gauge	Quantity	Gauge	Quantity	Gauge	Quantity	Gauge	Quantity	Gauge	Quantity	Gauge	Quantity
1												
2	1"	10,000	6"	16,000	11"		1' 4"		1' 9"		2' 2"	
3	1/8"	10,125	1/8"	16,200	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!
4	1/4"	10,250	1/4"	16,400	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!
5	3/8"	10,375	3/8"	16,600	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!
6	1/2"	10,500	1/2"	16,800	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!
7	5/8"	10,625	5/8"	17,000	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!
8	3/4"	10,750	3/4"	17,200	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!
9	7/8"	10,875	7/8"	17,400	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!
10	2"	11,000	7"	17,600	1' 0"		1' 5"		1' 10"		2' 3"	
11	1/8"	11,125	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!
12	1/4"	11,250	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!
13	3/8"	11,375	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!
14	1/2"	11,500	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!
15	5/8"	11,625	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!
16	3/4"	11,750	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!
17	7/8"	11,875	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!
18	3"	12,000	8"		1' 1"		1' 6"		1' 11"		2' 4"	
19	1/8"	12,163	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!
20	1/4"	12,325	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!
21	3/8"	12,488	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!
22	1/2"	12,650	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!
23	5/8"	12,813	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!
24	3/4"	12,975	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!
25	7/8"	13,138	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!
26	4"	13,300	9"		1' 2"		1' 7"		2' 0"		2' 5"	
27	1/8"	13,488	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!
28	1/4"	13,675	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!
29	3/8"	13,863	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!
30	1/2"	14,050	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!
31	5/8"	14,238	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!
32	3/4"	14,425	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!
33	7/8"	14,613	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!
34	5"	14,800	10"		1' 3"		1' 8"		2' 1"		2' 6"	
35	1/8"	14,950	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!	1/8"	#VALUE!
36	1/4"	15,100	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!	1/4"	#VALUE!
37	3/8"	15,250	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!	3/8"	#VALUE!
38	1/2"	15,400	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!	1/2"	#VALUE!
39	5/8"	15,550	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!	5/8"	#VALUE!
40	3/4"	15,700	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!	3/4"	#VALUE!
41	7/8"	15,850	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!	7/8"	#VALUE!
42												

**AP7: APPENDIX 7**

**TRANSPORTATION DISCREPANCY REPORT (TDR) PROCEDURES**

AP7.1. The following entries are required on the [DD Form 361](#):

<u>Block</u>	<u>Topic</u>	<u>Instructions</u>
1.	Date	Enter date of report.
3.	To	Enter "DESC-BI"
4.	Reporting Activity	Enter the name and DODAAC of reporting DFSP.
5.	Consignor	Enter the name of shipping location (origin).
6.	Consignee	Enter the name and DODAAC of the receiving DFSP (destination).
7.	Shipper	Enter the Shipper Name
8.	Carrier's Name	Enter the Shipper's SCAC
10.	Bill of Lading NO./Type	Enter the bill of lading number if applicable.
11.	Mode Code	Enter the shipment mode.
13.	Date Consignee Received Shipment	Enter the date of the receipt.
14.	Date Discrepancy Discovered	Enter the date the discrepancy was discovered (normally the date of receipt).
15.	Date Carrier Notified	If applicable, enter the date the carrier was notified of the discrepancy.
16.	Carrier Representative Contacted	If applicable, enter the name of the carrier representative notified of the discrepancy and their telephone number.
17.	Seal Numbers and Condition	If applicable, check the appropriate box to indicate if seals were intact, broken or missing. Include details as appropriate.
18.	Transportation Control Number	Enter the contract/ order number for shipment from contract sources and refineries. Enter the Shipment Document Number for shipments from a DFSP.

- |                   |  |  |
|-------------------|--|--|
|                   |  | Enter the transportation number if assigned.   |
| 19.               | Commodity and NSN  | Enter NSN and product code.  |
| 20.               | Type of Pack   | Enter "bulk."  |
| 21.               | Quantity Discrepant  | Enter the number of gallons over or short (difference between quantity shipped and quantity received). |
| 23.               | Unit of Issue  | Enter GL for gallons.  |
| 24.               | Units Billed/Shipped   | Enter the quantity shipped.  |
| 25.               | Units  | Enter the quantity received.   |
| 27.               | Value  | Use standard price to determine the value of the quantity variance.                                    |
| 28.               | Remarks: Enter the applicable cause (or probable cause of loss or gain) and associated data such as: Were compartments gauged and water cuts and temperatures verified upon arrival of conveyance? Were seals intact? Was any water detected? Was a dry tank certificate issued? Were there hose breaks or leaks during discharge? Attach copies of loading and discharge documents, and vessel ullage reports at origin, intermediate, and destination discharge points. Such data will help to determine responsibility and liability. |  |
| 29a. through 29d. | Preparer information: Enter the name, e-mail address, telephone number, and facsimile number of the preparer of the discrepancy report.  |  |



## AP8 APPENDIX 8 DEFINITIONS

AP8.1. DESC Fuel Capitalization: Transfer of Military Service owned fuel inventory to Defense Working Capital Fund (DWCF) ownership. Capitalization of service owned inventories is without financial reimbursement per DOD 7000.14-R, Financial Management Regulations, Volume 11B, Chapter 2, Establishment of Fund Activities, Transfer of Fund Functions and Closure of Fund Activities.

AP8.2. DESC Fuel Shipment: Fuel movement/transfer between DESC capitalized stock points resulting in internal DESC custody transfer of inventory accountability from one RO or TM to another RO or TM at capitalized DESC stock points e.g. DFSPs.

AP8.3. Fuel Sale: The issuance of DESC capitalized fuel to an end user/customer where DESC bills the customer for reimbursement to the Defense Working Capital Fund (DWCF).

AP8.4. Fuel Return/Credit: The return of fuel, defueled from aircraft or equipment where the fuel is returned from an end use customer's possession to DESC capitalized inventory. A credit transaction results in reimbursement of funds from the DWCF to the customer's DOD Activity Address Code (DODAAC).

AP8.5. In-transit Gain/Loss. A measurable quantity gained or lost occurring during the transportation from origin to destination. Divide quantity gained or lost by the quantity shipped; multiply by 100 to convert the decimal figure to a percentage factor.

AP8.6. Product Regrade: Product regrade is the procedure by which a product fully complying with a specification requirement is re-designated as another product for use. A product regrade transaction shall be processed in FAS to transfer accountability of the regarded inventory from the original account ledger to the gaining inventory account ledger.

AP8.7. Product Downgrade: A product downgrade is the procedure by which a product does not fully comply with a specification requirement and is downgraded to another product which specification requirements can be met for use. A product downgrade transaction shall be processed in FAS to transfer accountability of the inventory from the original account ledger to the gaining inventory account ledger.

AP8.8. Book Inventory: Book inventory is the resulting mathematical calculation of beginning physical inventory plus any receipts, product returns, and/or positive inventory adjustments minus sales, shipments, or negative inventory adjustments for each product inventory ledger.

AP8.9. Physical Inventory. Physical inventory refers to the actual on hand fuel inventory based on physical gauge readings or certified automatic tank gauge reading converted to US gallons using certified gauge strapping charts.

AP8.10. Operating Gain/Loss: The difference between book inventory and physical inventory.

AP8.11. Determinable Gain/Loss: A gain or loss of product that can be attributed to a specific event such as, a pipeline break or recovered abandoned product.

## APPENDIX 9

### Additional Service Contractual Requirements

AP9.1. The following attachments provide additional standard service contractual requirements that must be complied with under the terms of a service contract:

- AP9, [Attachment 1](#): Custody of Petroleum Product
- AP9, [Attachment 2](#): Responsibility for Government-Owned Petroleum Products
- AP9, [Attachment 3](#): Inventory Control Records and Systems of Record
- AP9, [Attachment 4](#): Liability for Fuel Spills
- AP9, [Attachment 5](#): Quality Control Plan
- AP9, [Attachment 6](#): Sampling and Testing of Petroleum Products
- AP9, [Attachment 7](#): Contractor Inspection Responsibilities
- AP9, [Attachment 8](#): Quality Representative
- AP9, [Attachment 9](#): Security and Fire Protection
- AP9, [Attachment 10](#): Contract Turnover Inspection

**AP9, Attachment 1: Custody of Petroleum Product**

- (a) Custody of petroleum products and risk of loss thereof shall pass to the Contractor as follows:
  - (1) **PIPELINE RECEIPTS:** When the product passes the flange connecting the carrier's pipeline and the Government-furnished Contractor-operated pipeline.
  - (2) **MARINE RECEIPTS:** When the product passes the permanent hose connections of the barge or tanker unloading the product.
  - (3) **TANK CAR RECEIPTS:** When the tank car comes to rest on the Government-furnished Contractor-operated siding.
  - (4) **TRANSPORT TRUCK RECEIPTS:** When the product passes from the transport truck discharge hoses into the Government-furnished Contractor-operated receiving facilities whether it be a storage tank, line, or any other type of receiving equipment.
- (b) Custody of petroleum products and risk of loss thereof shall pass from the Contractor as follows:
  - (1) **PIPELINE SHIPMENTS:** When the product passes the flange connecting the Government-furnished Contractor-operated pipeline and the carrier's pipeline.
  - (2) **MARINE SHIPMENTS:** When the product passes the permanent hose connections of the barge or tanker.
  - (3) **TANK CAR SHIPMENTS:** When the loaded tank car is picked up by the carrier.
  - (4) **TRANSPORT TRUCK SHIPMENTS:** When the loaded transport truck is released for shipment by the Contractor.

**AP9, Attachment 2: Responsibility for Government-Owned Petroleum Products**

(a) Title to any Government-owned petroleum products in the possession of or under the custody of the Contractor by reason of the contract, shall at all times remain in the Government, and shall be used only for the purposes set forth in this contract. The Government shall at all times have access to the premises where Government-owned petroleum products are stored.

(b) At the end of the contract period the Government may abandon any Government-owned petroleum products in place, at which time all obligations of the Government regarding such abandoned petroleum products shall cease. The contract price shall be reduced to reflect the fair market value of any abandoned petroleum products. If an agreement as to compensation for abandoned petroleum products cannot be reached in a timely manner, the Contracting Officer, in consultation with DESC, will make a formal determination. The decision will be subject to resolution in accordance with paragraph (d), Disputes, of the CONTRACT TERMS AND CONDITIONS - COMMERCIAL ITEMS clause.

(c) The Contractor shall not be liable for loss of or damage to all such property while in the possession of or under the custody of the Contractor by reason of this contract, or for expenses incidental to such loss or damage, except that the Contractor shall be liable for any such loss or damage (including expenses incidental thereto)--

(1) Which results from negligence, or bad faith, or willful misconduct of the Contractor, its employees, or agents; or

(2) Which results from a risk that is in fact covered by insurance or for which the Contractor is otherwise reimbursed, but the Contractor in such case shall be responsible only to the extent of such insurance or reimbursement.

(d) Except for those risks assumed by the Contractor pursuant to subparagraph (e)(1) of this clause, the Contractor represents and warrants that the prices stated in the Schedule do not include the cost of insurance covering risk or loss of or damage to such property while in the possession of or under the custody of the Contractor by reason of this contract, nor any provision for a reserve to cover such risk. In the event the Contractor is reimbursed or compensated for any loss or damage to such property, it shall reimburse the Government. The Contractor shall do nothing to prejudice the Government's rights to recover against third parties for any such loss or damage and, upon the request of the Contracting Officer, shall, at the Government's expense, furnish to the Government all reasonable assistance and cooperation (including the prosecution of suit and the execution of instruments of assignment in favor of the Government) in obtaining recovery.

**AP9, Attachment 3, Inventory Control Records and Systems of Record**

(a) **INTRODUCTION.** The Contractor shall prepare all documentation and systemically process related transactions in accordance with the information and instructions provided herein, DoD 4140.25M, Business Systems Modernization – Energy (BSM-E) formally known as Fuels Automated System (FAS) Interim Guidance, and applicable BSM-E Application Guidance. Documents and procedures are subject to change on a recurring basis and notifications of changes or newly published documents are announced during the LOGON process to the Fuels Enterprise Server (FES). Unless the Government has specifically stated it will provide the hardware (usually at Government-owned facilities), the Contractor shall provide requisite hardware (specifications will be provided by the Government) capable of processing all applicable inventory and accounting transactions on a daily basis (weekdays excluding weekend and holidays) through DESC-provided applications or software. The current processing methodologies include via a web/internet-based or web dial-in application under the BSM-E program to the FES. The FAS applications require the Contractor to either have internet access (with static IP address capability) or establish a dial-in account to the DESC BSM-E web server (once system access has been approved). Currently, DESC web-based applications use the DoD Public Key Infrastructure (PKI) compliant web browser which will be provided to the Contractor by DESC. These identified DESC systems require user identifications and passwords in accordance with DoD Automated Data Processing (ADP) Level III systems access. The Contractor shall be responsible for (in conjunction with DESC/DLA) identifying employees that will be processing inventory/accounting transactions for obtaining requisite systems access for those employees. It should be noted that DoD ADP Level III systems access requires a National Agency Check (NAC) investigation. Those contractors which have not had a NAC will be provided forms and fingerprint cards for the investigation, which DLA will initiate. The Contractor shall notify DESC when Contractor personnel with access privileges no longer work at the contract facility or no longer require access. Systems Access Request Forms and submission procedures can be found at <http://www.desc.dla.mil/DCM/DCMPage.asp?LinkID=DESCSFASInterimPolicy> under DESC-I-24, “DESC Automated System Access Request Procedures. Locations that do not have direct connectivity to BSM-E shall forward all transactions to the designated DESC Office for processing until connectivity is established.

(b) **AUTOMATED FUEL INVENTORY REPORTING REQUIREMENTS.**

(1) The Contractor shall prepare all necessary documentation (see paragraph (b) (5)) for, and systemically process, each transaction affecting their inventory of Government-owned products. Within 24 hours of each transaction (excluding weekends and holidays), the Contractor shall input transaction data into the automated inventory and accounting system(s) or applications designated/provided by the Government. Initial training for inputting transactional data will be provided by the Government via on-site support or via electronic means, such as user manuals or on-line support/tutorials. The Contractor is responsible for timeliness and accuracy of transaction data input by its employees. The Government will advise the Contractor of any changes in processing and reporting procedures. The Government reserves the right to telephone the Contractor on a daily basis (weekdays excluding weekends and holidays) to obtain information concerning transactions processed to monitor transactions using identified processing systems.

(2) The Contractor shall record the physical inventory quality (corrected to 60 degrees Fahrenheit) in the automated inventory system for each Government-owned product stored at the facility. Daily inventories shall be recorded as of 0800 hours local time and monthly inventory shall be recorded as of 0800 hours local time on the first calendar day of each month. However, systematically, the end of month (EOM) physical inventory shall be reported against the last calendar day of the preceding month. The Contractor shall have the account reconciled in accordance with DESC-P-1 and DESC-I-4 located at <http://www.desc.dla.mil/DCM/DCMPage.asp?LinkID=DESCSFASInterimPolicy>.

(3) The Contractor shall prepare inventory adjustment documents (DD Form 1348-8) in accordance with the guidance provided in DESC-P-1 and DESC-I-4. A *detailed explanation* shall be provided by the Contractor on each inventory adjustment document explaining each gain and/or loss in excess of DESC provided tolerances. Each document shall be signed and dated by the Contractor’s representative and the authorized

Government representative and copies provided to DESC-FIE at 703-767-9394. The authorized Government representative shall indicate whether he/she concurs or nonconcurs with the statement and shall provide an explanation for any nonconcurrence. The term **authorized Government representative**, as used in this clause, refers to the quality representative assigned to the DFSP.

**\* Inventory Operating Gain or Loss Tolerances**

<b>Product Group</b>	<b>Allowable Operating Tolerance Gain/Loss Percentage</b>
Distillates (Diesel Fuels, Jet A1, JP5, JP8, JPTS, F76, Kerosene, other residuals,...etc)	.0025 or .25%
JP4	.003 or .3%
Aviation and Motor Gasoline (AVGAS (130), MOGAS (MUR, MUP, etc.))	.005 or .5%
Fuel System Icing Inhibitor (FSII)	.0025 or .25%
Lube Oils**	.0025 or .25%

\*\* Note: All Lube Oil transactions are to be reported at “gross” or ambient temperatures

(4) **END OF MONTH RECONCILIATION.** End of month reconciliation procedures are detailed in DESC Interim Guidance. See DESC-P-1 located at

<http://www.desc.dla.mil/DCM/DCMPage.asp?LinkID=DESCSFASInterimPolicy>. The Contractor shall retain all supporting documents on file for future audits.

(5) The following are documentation requirements for transactions:

Note: DD Forms can be located at the following DOD Web Site;

<http://www.dtic.mil/whs/directives/infomgt/forms/formsprogram.htm> and DESC Forms can be located at the following DESC Web Site: <http://www.desc.dla.mil/DCM/DCMPage.asp?LinkID=DESCForms>

**TRANSACTION**

Appointment/Delegation Letters

**DOCUMENT**

Formal Correspondence

**RECEIPTS**

Receipts from a DESC Procurement Contracts

Receipts of Shipments from a DFSP

DD Form 250/250-1

DD Forms 250/250-1

DD Form 1348-7

**SHIPMENTS**

Shipments from a DFSP to authorized customers

Shipments between DFSPs

See Sales

DD Forms 250/250-1

DD Form 1348-7

Receipts or returns of product from an end-user (without credit)

DD Form 1348-8

**INVENTORY**

Physical Inventory

DD Form 1348-8\* and/or

DD Forms 2921 / 2921c /

2920

\* DD Form 1348-8 is required for End of Month inventory reporting only

All Inventory Adjustments

DD Form 1348-8

Normal handling of variances (excessive)

- Determinable losses such as spills, line breaks, non-recoverable tank bottoms, major disasters, combat losses, etc.

DESC Form 24 or DD Form 1348-8

Condition/Identity Change

DD Form 1348-8

- Downgrade, regrade, or additive

### **ISSUES/SALES OR RETURNS/CREDITS**

Issues of product from a DFSP to an end use customer

DD Forms 1898 or 1149  
Automated data capture printout  
If required, supporting DESC  
Form 1898

Return of product from an end user with or  
without credit

DD Form 250/250-1  
DD Form 1348-8 (w/o Credit

Only)

Automated

DD Forms 1898 or 1149  
Data Capture printout

### **REPORT OF FINANCIAL LIABILITY AND PROPERTY LOSS**

As required, when directed by the DESC Responsible Officer DD Form 200

#### **(c) OTHER REQUIREMENTS.**

(1) **STORAGE TANK OUT OF SERVICE.** Prior to removing a storage tank from service, the Contractor shall immediately notify the authorized Government representative by telephone, with follow-up confirmation in writing, providing the date and time the tank is scheduled to be removed from service. In addition, the Contractor shall provide the authorized Government representative a written estimate of unrecoverable tank bottoms. The estimate will be reviewed and approved by the authorized Government representative prior to submission to the DESC-ME.

(2) **UNRECOVERABLE TANK BOTTOMS.** Prior to the end of the contract period, the Contractor shall provide the authorized Government representative a written estimate of unrecoverable tank bottoms. The estimate will be reviewed and approved by the authorized Government representative prior to submission to DESC-FIE.

(3) **REPORTING FUEL ADDITIVES AND SLOP FUEL.** Government-owned fuel additives, slop fuel, and transmix stock at the DFSP will be treated as separate and distinct items, and all transactions shall be documented as outlined herein. These products will be recorded in gallons and reported under the approved National Stock Number (NSN).

(i) **An auditable identity change document (DD Form 1348-8) shall be used to account for bulk FSII blended with bulk fuel and fuel downgraded to slop. Fractions of a gallon cannot be used (e.g., if 1.5 gallons of FSII were injected, report 1 gallon and record the .5 once a whole gallon is used).**

(ii) Packaged additives such as COR, ASA, AS1, AD1, and CO1 shall be accounted for locally using a general log or ledger. As the additive is injected, record the amount in the log to track usage and inventory. No other documentation is required.

(4) **CREATION OF SHIPMENT TRANSACTIONS.** As required and directed by the Government, storage Contractors shall create electronic shipment transactions using the USBank POWERTRACK on-line freight payment system. The Government shall advise Contractors of any changes in processing and reporting procedures. Contractors shall contact the Government when additional guidance is required. CONUS storage Contractors shall maintain a daily written log of motor carrier performance to include: carrier, destination, number of trucks ordered, number of trucks furnished, and deficiencies. On the last business day of each calendar month, the Contractor shall forward a copy of the daily written logs to the DESC Americas office having oversight of the motor carrier contract. Paragraph (4) of this clause is not applicable to locations within Afghanistan.

(5) **STATEMENT OF AUTHORIZED SIGNATURES.** The Contractor shall furnish the authorized Government representative a statement containing the names and handwritten signatures of persons authorized by the Contractor to receive Government-owned product or property. The contractor is required to provide the DESC Contracting Officer /Government representative or DESC Accountable Officer with



written notification when previously authorized persons depart (leave, quit, or transfer...etc.) and new personnel are appointed to these positions.

(6) **CHANGE IN DFSP OPERATOR.** Transfer of residual inventory from expired contracts will be made regardless of whether there is a change in contractors. The transfer of DFSP product will be accomplished as follows:

- (i) The outgoing Contractor, the successor Contractor, and the authorized Government representative will jointly gauge all tanks, document each storage tank gauge readings on [DD Form 2920](#), Account Transfer Document, and [DD Form 2921c](#), Physical Inventory Petroleum Products, Continuation, and calculate the total physical inventory for each grade of fuel. The DD Form 2920, Physical Inventory Account Transfer Document, will be signed by the incoming and outgoing Contractors and Responsible Officers.
- (ii) Upon completion of the inventory, a summary DD Form 1348-8, supported by the applicable DD Forms 2920/2921c will be completed for each grade of fuel.
- (iii) The following certification will be typed in the Memo block of each DD Form 1348-8, DFSP Inventory Accounting Document and End of Month Report and signed by the appropriate individuals:

The inventory recorded on this DD Form 1348-8 has been transferred from contract   (old number)   to contract   (new number)   on   (date)  .

Signature                     (Outgoing Contractor)                     /                     (New Contractor)                    

Typed/Printed Name and Titles                     (Outgoing Contractor)                     /                     (New Contractor)                    

(iv) **The Contractor shall provide this information to the DESC-FIE by telephone and by mailing one copy of each DD Form 2920, DD Form 2921c and DD Form 1348-8.**

(v) The Government will mail three copies of the Inventory Reconciliation Document Register\* covering the transfer month to the outgoing Contractor. The outgoing Contractor shall apply appropriate certification to the Inventory Reconciliation Document Register\* and retain one copy, provide one copy to the new Contractor, and return the third copy to the Government.

\* Not separately required if DESC provided automated inventory/accounting systems or applications are being used to electronically process transactional data (i.e., applications under the DESC BSM-E program).

(7) **RETENTION OF ACCOUNTABLE RECORDS AND DOCUMENTS.** All records and documents identified above are DESC-accountable records and must be retained as follows:

Appointment letters e.g. RO/PA appointments...etc	Three years
Delegation letters	Retain current letter on file at DFSP
Receipts from a DESC Procurement Contracts	Six years, three months after the accounting month
Sales/Issues and Returns (with credit)	Six years, three months after the accounting month
Government or Commercial Bills of Ladings	Six years, three months after the accounting month
Report(s) of Survey (ROS) and all supporting documentation	Six years, three months after completion of ROS
Returns without credit	Current Fiscal Year (FY) plus two additional FYs.
Shipments between DFSPs	Current Fiscal Year (FY) plus two additional FYs.

(Shipment documentation (e.g. DD Forms 1348-7, 250-1..etc.)

Physical inventory data/documentation	Current Fiscal Year (FY) plus two additional FYs.
All inventory adjustment documentation	Current Fiscal Year (FY) plus two additional FYs.
Product condition or identity changes, supporting laboratory analysis	Current Fiscal Year (FY) plus two additional and FYs.
Contract modifications or change orders	Two years after the expiration of the current contract

**AP9, Attachment 4: Liability for Fuel Spills**

The Contractor shall take all measures required by law and good business practice to prevent fuel spills (including, but not limited to, any spilling, leaking, pumping, pouring, emitting, emptying, or dumping into or onto any land or water). In the event that the Contractor's failure to take such measures results in a fuel spill, the Contractor shall be liable for the costs of spill containment, cleanup, and disposal. In addition, the Contractor shall reimburse the Government for any resulting fines or penalties. For purposes of this clause, the term fuel includes all petroleum and additive products.

**AP9, Attachment 5: Quality Control Plan**

- (a) Upon award, the Contractor shall prepare, in triplicate and in English, a Quality Control Plan (QCP). Prior to the first receipt of Government-owned product into the facility, two copies of the QCP shall be forwarded to the Contracting Officer and one copy to the assigned Quality Assurance Representative for approval.
- (b) The QCP shall include the following quality control procedures employed by the Contractor.
- (1) Receiving (both product and additives);
  - (2) Blending;
  - (3) Sampling;
  - (4) Testing;
  - (5) Storage and handling;
  - (6) Loading and shipping;
  - (7) Calibration program for testing and measuring equipment in accordance with ISO 10012-1, "Quality Assurance Requirements for Measuring Equipment, Part I." Equivalent local regulation, as appropriate, may be used as well. Whichever program used must include a section addressing meter proving (used to determine quantity) and must comply with the American Petroleum Institute Manual of Petroleum Measurement Standards, Chapters 4, 5, and 6, or equivalent foreign standard. For any item that requires calibration but is not covered by ASTM, API, or IP publications, the applicable manufacturer's recommended calibration method(s) outlined in the applicable industry publication shall be used if acceptable to the Government;
  - (8) Quantity measurement;
  - (9) Records and reports; and
  - (10) Corrective action procedures (to include, but not be limited to, procedures for notification of Quality Representative, actions to be taken on discovery of off-spec product during receipts/shipments, upgrading procedures for Contractor-caused contamination, leaks, etc.). The QCP shall also include an organizational chart of key personnel and their responsibilities and a schematic diagram of the facility with key inspection/activity points marked for each product handled.
- (c) The QCP shall require that each Contractor employee be familiar with its content and shall state that it must be reviewed semiannually and revised as needed. Revision should occur when any change is made to the inspection system, when any corrective action needs to be incorporated due to quality problems, and as otherwise necessary. The Contractor shall sign and date each revision of the QCP.

**Removal of Water Bottoms**

Storage tanks for DESC use shall be equipped with positive water sumps for removal of all water bottoms. All storage tanks shall be drained of water a minimum of once each week and whenever storage tank gauging indicates water is present. (Weekly water drainage is necessary because the datum plate may not necessarily be the low point in the storage tank. Water could possibly accumulate below the datum plate and not show up in the gauging process.) Additionally, all storage tanks shall be drained of water prior to any transfer of fuel and after a minimum of 4 hours or maximum of 24 hours settling time following each product receipt. Storage tanks equipped with floating roofs shall be gauged for water after each rain and drained if water is found present. Product and water levels shall be gauged before and after the draining of water. Water gauges of each storage tank shall be taken and recorded each time it is gauged for product. (Each storage tank shall be equipped with a fuel/water separation system for collection of all product or water dispensed from its bottom water drain(s). This system shall have the capability to return separated product back into the same storage tank).

**AP9, Attachment 6, Sampling and Testing of Petroleum Products**

(a) **SAMPLING.** The Contractor must provide sampling services using qualified personnel, facilities, and equipment on-site and shall include all associated costs in the monthly service charge. All samples must be taken in accordance with ASTM D 4057, Standard Practice for Manual Sampling of Petroleum and Petroleum Products (API Manual of Petroleum Measurement Standards (MPMS), Chapter 8.1).

(b) **TESTING.** The tests identified paragraph (c) are a required part of the services to be provided. Those tests identified in the attachment which are part of a higher order analysis (defined as follows: Composite Samples, Storage Tanks After Receipt, Interface Mixture, Dormant Stocks, and Individual Tests, including particulate contamination) shall be provided by the Contractor using its own qualified personnel, facilities, and equipment.

**(c) MINIMUM REQUIREMENTS FOR STORAGE SAMPLING AND TESTING**

*(NOTE: These are examples of the types of sampling and testing required and may vary depending on product/mode of shipment)*

LOCATION OF STOCK	TESTS
1. All level sample from <b>each tank</b> on tank truck prior to unloading.	a) Workmanship, Finish, & Appearance b) Color, Visual c) API Gravity or Density d) *Flash Point
	(*Flash Point tests run on composite sample).
2. <b>All Level Sample from receipt tank</b> After receipt and before issue	a) Workmanship, Finish, & Appearance b) Color, Visual c) API Gravity or Density d) Flash Point e) Particulate Matter f) Distillation g) Copper Strip Corrosion h) Freezing Point i) Existent Gum j) Water Reaction k) Fuel Systems Icing Inhibitor (if present) l) Filtration Time m) Water Separation Index Modified (if fuel does not contain conductivity additive.) n) Conductivity
3. Composite sample of loaded <b>tank trucks/tank cars.</b>	Same as Paragraph 1, above.

## AP9, Attachment 7, Contractor Inspection Responsibilities

- (a) Inspection and tests by the Government of services, facilities, and equipment specified within this contract does not relieve the Contractor from responsibility to meet all requirements of the contract.
- (b) The Contractor shall furnish personnel, facilities, and equipment on-site to accomplish the following routine tests and procedures. These on-site resources may be provided by Contractor personnel or by a commercial source action on behalf of the Contractor. The Quality Representative will not be responsible for performing any of these services for the Contractor.

- (1) Sampling of storage tanks, shipments and receipts in accordance with ASTM D 4057, Standard Practice for Manual Sampling of Petroleum and Petroleum Products (API Manual of Petroleum Measurement Standards (MPMS), Chapter 8.1);
- (2) Retaining of product composite samples from shipments and receipts as follows:

<u>METHOD OF SHIPMENT</u>	<u>MINIMUM QUANTITY</u>	<u>MINIMUM RETENTION PERIOD</u>
Pipeline	20 liters	60 days
Tanker/Barge		
Parcel Composite	20 liters	90 days
Each compartment	0.5 liters	90 days
Navy Fleet Oilers/Vessels	10 liters	60 days
Tank Truck/Car	1 liter	15 days

**NOTE: After the minimum retention period, samples shall be tested for Appearance, Color (Visual), API Gravity/Density and Flash Point and, if found to be on-specification, shall be returned to like Government stock on-site. Sample containers may be reused if properly cleaned.**

- (3) Determining the presence of water in storage tanks, shipments and receipts. Ensure that accurate water cuts are obtained by means of a water indicating paste conforming to MIL-W-83779B. Two suggested sources are Stewart Hall Chemical Testmaster Water Indicating Paste or Sartomer Sar Gel Water Indicating Paste (see Note 2 below);
- (4) Determining Density at 15 degrees Celsius or API gravity of products by ASTM D 1298 or ASTM D 4052 (see Note 2 below);
- (5) Determining the temperature of products by the API MPMS, Chapter 7 (see Note 2 below);
- (6) Determining the Appearance of applicable products using ASTM D 4176, Procedure 1 (see Note 2 below);
- (7) Determining the visual color of products.
- (8) Determining the Flash Point of applicable products using test methods cited in the appropriate product specification (see Note 2 below);
- (9) Conversion of gross to net gallonage (liters);
- (10) Determining the percentage (volume) of fuel system icing inhibitor (FSII) by means of a portable refractometer in accordance with ASTM D 5006. One suggested source is H.B. Industries, Inc., Glenview, IL 60025 (B/2 Anti-Icing Additive test kit) (see Note 2 below); and
- (11) Determining the range of fuel electrical conductivity using ASTM D 2624. One suggested source for a conductivity meter is Emcee Electronics, Inc., Sarasota, FL 33581 (Model 1152) (see Note 2 below).

**Note 1: All costs for providing the above tests and procedures shall be billed in accordance with the terms and conditions of the contract. The only exception to the Contractor's obligation to provide these**

services as part of the monthly service charge is when the tests described above are part of the higher order analysis (defined as the following categories: Composite Samples, Storage Tanks After Receipt, Interface Mixtures, Dormant Stocks and Individual Tests (including particulate contamination) found in the attachment to the solicitations entitled MINIMUM REQUIREMENTS FOR STORAGE SAMPLING AND TESTING. Provisions for providing higher order analyses are covered in Appendix F.

**Note 2: Upon request, the Contractor shall permit the Quality Representative unrestricted use of the equipment and ancillary supplies needed to perform this test/procedure on behalf of the Government.**

(c) The Contractor shall furnish representative samples of the product in each storage tank, shipment or receipt at the request of, and in the manner and to the place designated by, the Quality Representative. Sample size will be 2 gallons for gasoline-type fuels and one gallon or 10 gallons for jet diesel-type fuels. The number of samples to be furnished during any 12-month period shall not exceed eight times the number of tanks specified in the contract. Such samples shall be packed, marked, and shipped by the Contractor, shipping expense prepaid, in containers and shipping boxes furnished by the Contractor. Sample containers shall be epoxy coated on the interior. This requirement is in addition to sampling required elsewhere in this clause and the contract. All reasonable direct shipping costs associated with samples required by this paragraph shall be reimbursed upon request from the Contractor and such costs shall not be included in the monthly service charge. However, all other costs related to this requirement shall be included as part of the monthly service charge.



## AP9, Attachment 8, Quality Representative

The Quality Office assigned inspection responsibility under this contract is:

DESC Middle East  
ATTN: Quality Manager  
PSC 451, Box DESC-ME  
FPO AP 09834-2800  
[Location: Juffair, Bahrain]  
Phone: 973-17-85-4658  
FAX: 973-17-85-4670

**TABLE AP9-1**

### Tests required, aviation turbine fuels

PROPERTIES	B-1 TEST	B-2 TEST	B-3 TEST	C TEST
Appearance 1	X	X	X	X
Color (visual)	X	X	X	X
Density or API gravity	X	X	X	X
Particulate matter	X	X	X	
Distillation	X	X	X	
Copper strip corrosion	X	X	X	
Freezing point	X	X	X	
Existent gum	X	X	X	
Water reaction	X	X	X	
Lead content (If contamination with leaded fuels is suspected)	X	X	X	
Fuel system icing inhibitor	X	X	X	
Filtration time (JP-4 & JP-8)	X	X	X	
Water separation index (JP-4 and JP-8) 2, 3	X	X	X	
Conductivity (JP-4 and JP-8) 4	X	X	X	
Color (Saybolt)		X		
Acid number		X		
Water in Petroleum Products by Karl Fisher 5	X	X		

#### NOTES:

**1** Obtain sample in a clear round one quart glass bottle, swirl the bottle vigorously so a vortex is formed. Visually check for sediment at the point of the vortex. If sediment is visible, an investigation is necessary in order to determine the source of the contaminant (a spot larger than 3 mm diameter indicates corrective action may be required to prevent the delivery of contaminated fuel).

**2** If the capability does not exist to perform this test at the terminal, a sample will be sent to the nearest Service laboratory that does have the capability. In the event operational necessity dictates issue of product before results are obtained from the Service laboratory, shipments may be made, however, when laboratory results indicate failure, notify DESC-BQ.

**3** Water separation index, modified, testing is not performed if the fuel contains conductivity additive.

**4** If fuel contains conductivity additive, CU readings should be taken within two minutes of sampling.

**5** This test is being used to determine if water in the fuel is the cause of “Apple Jelly” formations downstream of the Defense Fuel Supply Points (DFSPs). Test data will be kept at the DFSP and shall be included as a part of any report pertaining to Apple Jelly discovered downstream of the DFSP.

**TABLE AP9-2****Tests required, diesel fuels and kerosene**

<b>PROPERTIES</b>	<b>B-1 TEST</b>	<b>B-2 TEST</b>	<b>B-3 TEST</b>	<b>C TEST</b>
Appearance 1	X	X	X	X
Color	X	X	X	X
Density and API gravity	X	X	X	X
Distillation	X	X		
Flash point	X	X	X	X
Carbon residue 2 (diesel fuel only)	X	X		
Cloud point		X		
Pour point		X		
Copper strip corrosion		X		
Cetane index		X3		
Viscosity		X		
Water & sediment by centrifuge		X		
Particulate (A-A-52557 & F-76)	X	X		
Accelerated stability (F-76)		X		
Sulfur		X 4, 5		

**NOTES:**

**1** For NATO F-76, if the sample has no visible particulates, but is otherwise not clear and bright per ASTM D 4176, procedure 1, then the product must meet the requirements of ASTM D 2709, 0.05 percent volume of water and sediment, maximum. The fuel is acceptable for appearance if the water and sediment content is 0.05 percent volume or less. If the sample fails ASTM D 4176, procedure 1, because it contains visible sediment or particulate matter, but meets the requirement of 10 milligrams per liter, maximum, in accordance with ASTM D 5452 or ASTM D 6217, then the fuel shall be considered acceptable provided all other requirements are met.

**2** Only required if change in color and/or relative density occurs after procurement.

**3** Cetane Index can only be run if no ignition improvers are present. Otherwise, Cetane number shall be given.

**4** Kerosene. Grade No.-1K only, if intended for non-flue connected burner.

**5** Test to be performed if equipment is available.

**AP9, Attachment 9, Security and Fire Protection**

- (a) The entire facility shall be enclosed by a fence suitable to deter unauthorized access. The fence shall be fitted with gates that may be padlocked when not in use.
- (b) A method of visitor and entrance control will be in effect. A visitor register shall be maintained.
- (c) An internal, self-powered communication system linking all critical points of the facility, capable of serving both as an alarm system and for conduct of terminal operation, will be in use.
- (d) A water supply and fire fighting equipment conforming to National Fire Protection Association and American Petroleum Institute standards will be maintained. At locations outside the United States, other standards may be used with prior approval of the Contracting Officer.

**AP9, Attachment 10, Contract Turnover Inspection**

**The outgoing Contractor, during the last 10 working days of the contract, shall permit personnel of the successor Contractor access to all contracted facilities to observe operations. The successor Contractor shall, during the last 96 hours of the expiring contract, be provided assistance by the outgoing Contractor, DESC representatives, and the Contracting Officer's Representative (COR) in accomplishing a joint facilities turnover inspection. The inspection shall provide for a facilities walk-through and property inventory, product sampling and testing, and a complete product inventory. The successor Contractor agrees to protect and not disclose any inadvertently disclosed proprietary information of the outgoing Contractor discovered during the turnover period.**

**Designation of The Defense Fuel Region**

(a) The Defense Fuel Region to which reference is made herein is the--

DESC Middle East  
PSC 451, Box DESC-ME  
FPO AP 09834-2800  
[Location: Juffair, Bahrain]  
Phone: 011-973-1785-4661 OR 4654 DSN 318-439-4661 OR 4654  
FAX: 973-17-85-4655